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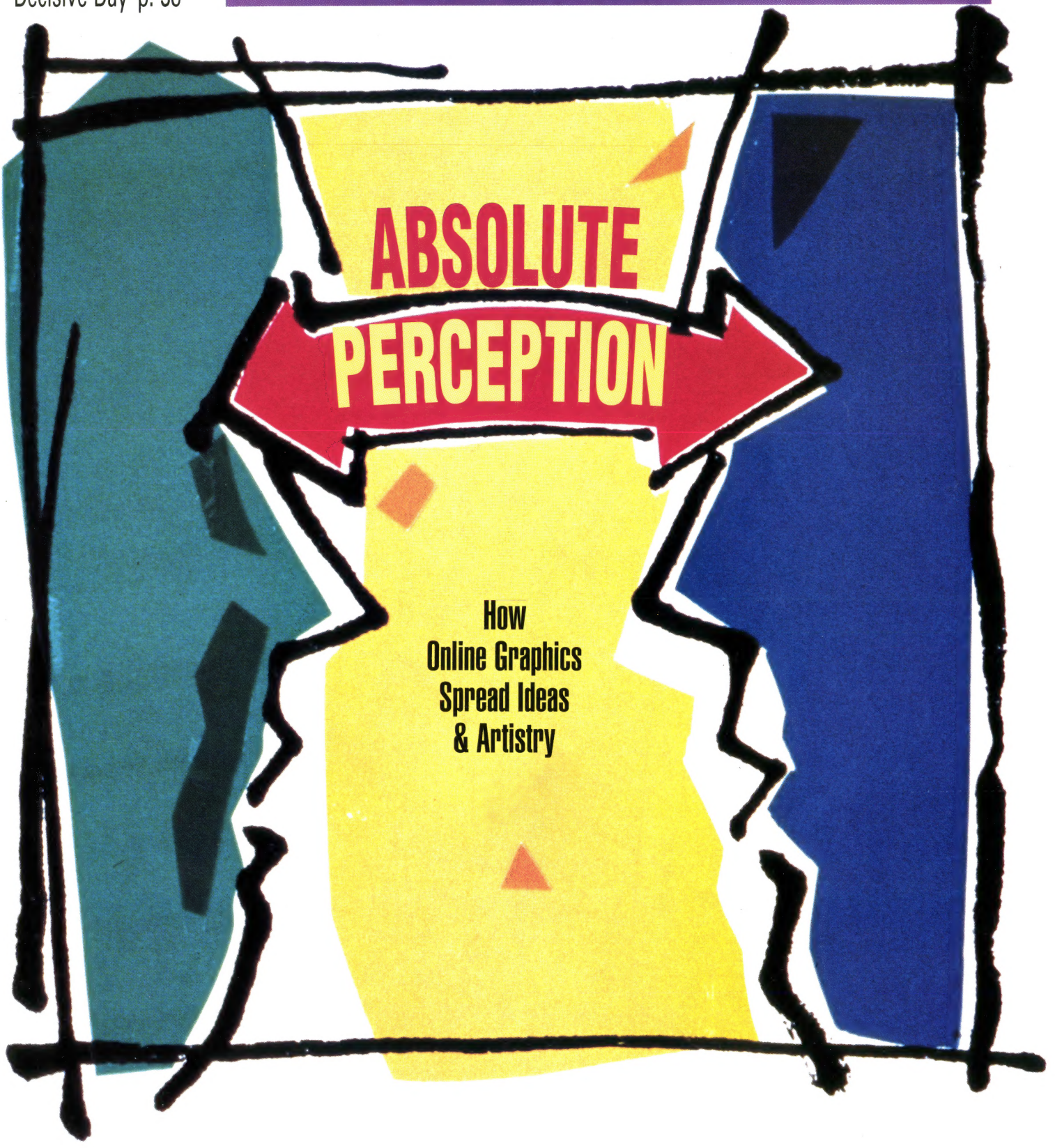
COMPUSERVE MAGAZINE

MAUGing On: Mac Fans Find Community–p. 20

Make Contact with Direct Mail–p. 30

Recalling WWII's Decisive Day–p. 38



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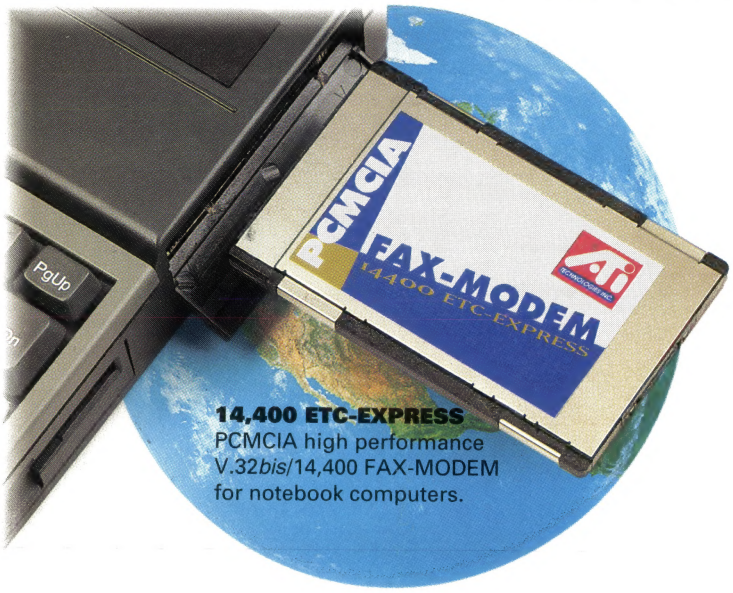

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Don't have time to type those axiomatic "thousand words" or stories that every picture says or tells? With digitizing equipment and faster modems flourishing, you don't have to. CompuServers attempting to communicate their ideas and artistry to others are doing it with computer graphics instead. Here's a look at why everything online's coming up GIF and JPEG. Includes: Using shareware image editors; the Smithsonian's online curator; what copyrights prohibit; retrieving and viewing images; a directory of forums with graphics.

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20 ***MAUG*ing On**
The Macintosh has entered into its second decade as the computer whose owners continue to feel a special kinship with each other, secure in the knowledge that they have bought something more than a digit-cruncher. Nowhere does this sense of community and creativity manifest itself better than in the MAUG forums, a premier source of support, software and shared Mac experience. Plus: Close-ups of MAUG members and sysops; a directory with sample files.

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Small businesses can't blow big bucks on massive marketing campaigns, but they can try a hybrid of targeted direct mail and solicitation to build up their client base. Well-designed mail pieces and even packages—microwave popcorn that suggests "cooking up new business"—set up later contact with potential customers who'll remember you. Also: Building or buying mailing lists; related uploads.

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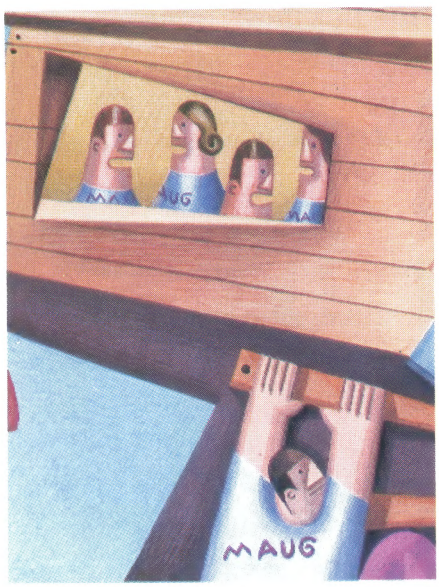

MICHAEL MCLAUGHLIN

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Too Hot to Print

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Dear Reader

No longer limited to plain ASCII text, many CompuServers are letting pictures tell their stories. Armed with scanners and paint programs, they're converting everything from Dom Perignon labels to photos of bonsai trees into computer graphics and uploading them into forums.

But, not just graphics-related forums. This month's cover feature "Sight Onscreen," beginning on page 10, shows that GIF—Graphics Interchange Format—files are proliferating in forum libraries all over the Information Service. Members are sharing information, seeking feedback and just having fun thanks to cheaper digitizing equipment and faster modems.

For instance, Crafts Forum member Kim Overholt uploaded GIFs monthly showing a new section of her "mystery" quilt. Without knowing what the final product looked like, other members built the quilt, one piece at a time. Milton Teruel, or "Uncle Milty" as he's known by fellow Comics/Animation Forum members, uses the forum as a testing ground for his creative works in progress. And in the Pets/Animal Forum, online judges viewed GIFs of members' cats and horses to select the winners in "virtual" pet shows.

Besides a graphic presentation of GIFs online, the feature also includes information on "pixel-twiddling" shareware image editors, used for putting your dog's head onto your mother-in-law's body in family photos, and the Smithsonian Institution's online curator. Plus how-to tips for bringing images to life onscreen, including uploading, retrieving and viewing GIFs, and copyright issues. But, don't take our word for it. See for yourself.

* * *

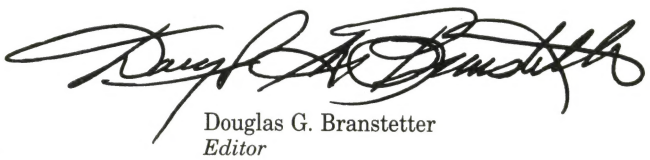
The Macintosh computer is a decade old this year, but the MAUG forums got their start even earlier. The Micronetworked Apple Users Group ("MicroNet" was CompuServe's original name) was born in 1980. Fourteen years later, MAUG has grown to 12 general-interest, five vendor and two related Newton forums where members still gather to get advice, retrieve the latest utilities and add-ons and discuss everything from new technologies, such as the arrival of a Macintosh on the PowerPC, to member romances. Find out what this Mac brain trust offers and how the bigger, better MAUG has maintained its community spirit in "The House of Macintosh," p. 20.

* * *

Gearing up to celebrate another milestone, CompuServe members around the world are mobilizing for the 50th anniversary of the D-Day Normandy invasion. Read about members' recollections of June 6, 1944, and their plans for commemorating it in "D-Day Remembered," p. 38.

* * *

Also in this issue, you'll find a perforated card listing the online areas where you can receive help from CompuServe Customer Service. Tear out the card and keep it by your computer for reference. Answers to many frequently asked questions are available online and knowing where to find them can save you a phone call.



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Letters

Gardening

The cover story on natural gardening ("Down to Earth," January, p.10) was excellent. I am a new CompuServe member but have appeared on radio and television with gardening information for more than 20 years. I currently host a weekly gardening radio program in Cleveland, Ohio, called "The North Coast Gardener." It is heard every Sunday from 8 a.m. to 10 a.m. EST on WWWE, 1100AM. On the show, I promote my availability to answer gardening questions on CompuServe and have been very successful. Anyone needing gardening advice with a Midwest flavor should contact me at 73524,616.

Alan H. Hirt
"North Coast Gardener"
Valley City, Ohio

One of Jeff Ball's tips ("TV's Soil Man Talks 'Yardening,' " January, p.14) is not to use pesticides to prevent weeds because they will stress the lawn. A better reason not to use pesticides to prevent weeds is because pesticides are intended for insects, not weeds. *Herbicides* prevent weeds.

Chuck Pearson
Dearborn Heights, Michigan

Monitor

Regarding the article "Some Arithmetic Savoir-Faire" (January, p.6): I am a French-speaking Belgian. In France, Belgium and Switzerland, we say *septante* for 70 and *nonante* for 90. In Belgium as in France, we say *quatre-vingts* for 80, and the Swiss say *huitante* for 80. The article reported to the contrary.

Even more confusing is that French-Canadians say *octante* for 80 but some of them say *septante* and *nonante*. The French way is the most difficult. The Swiss are perhaps neutral but not this time. In fact, Belgians are well-known as people of compromise, which is perhaps the reason why Brussels is capital of the European Economic Community.

Etienne Sohier
Brussels, Belgium

I was very honored and pleased to read that the world knows there is such a place as Belgium. However, the content of "Some Arithmetic Savoir-Faire" surprised me. As a long-time Belgian resident, I can assure you that in Belgium nobody says *huitante* when they mean 80. *Quatre-vingts* is the term we use. We are taught that the word *huitante* is of Swiss dialect and originated in the banking world. Always glad to hear people still care about French, though. It's such a beautiful language.

Jordi Goetstouwers
Antwerp, Belgium

Internet

The article "Welcome to Internet" by Cathryn Conroy (December, p.40) was well-written and a much-needed guide for Internet novices. But while it encouraged members to expand their horizons, it failed to mention the likely impact on their time and pocket book. It doesn't mention the flood of mail received upon subscribing to Internet mailing lists, sometimes more than 10 messages a day. Yes, CompuServe Information Manager allows you to review the mail header before downloading, but the header doesn't always relate to the message contents, especially when it is part of a thread of messages. Nor did the article mention the enormous headers that Internet messages contain. To most users it is excess baggage, but we pay for the time spent downloading it.

Bob Earp
White Rock, British Columbia,
Canada

Surge Protectors

Edmond D. Jones' letter (December, p.4) mentioned that "better quality surge protectors now include a connection for the telephone line to pass through before proceeding to the modem." This is not always true. While "better quality surge protectors" do actually include some circuitry to protect the modem, I recommend opening up the unit and verifying that it does contain such circuitry.

I purchased a plug strip that claimed to offer surge protection and also included two phone connections for RJ-11 plugs marked "in" and "out." When I took it apart, I saw that the "in" was merely connected to the "out" without anything in between, thus offering absolutely *no* protection. When I returned the strip and showed the store's customer service department the problem, they agreed it was improper to sell a strip that implied it would protect phone lines. However, I returned to the store a month later, and the strip was still on their shelf.

Robert W. Bradspies
West Los Angeles, California

Forum Idea

I would like to suggest that a Canadian Forum on CompuServe is long overdue. We have many similarities to the United States, but also many differences, such as taxes, Medicare, laws, politics and the Quebec Separation issue. It would be ideal to direct opinions and questions in a forum addressing those topics.

I welcome the new Japan Forum and look forward to browsing it, but I do think it's about time you looked at your neighbour as well.

Norm Pellatt
Vancouver, British Columbia,
Canada

Older Versions

I don't have Windows 3.1; I have Windows 3.0. I don't have a '386 or a '486; I have a '286. I don't have VGA or Super VGA, I have EGA. I must be one of thousands of computer users who haven't upgraded to the latest versions. I try and buy shareware and commercial software, and I use CIM regularly for e-mail. Like others, however, I am old enough to remember the thrill of upgrading a 32K machine to 64K.

So, listen you guys out there: When you are writing your great new program, game or whatever, by all means give it all the latest gizmos, but how about making it *backwards* compatible for us oldies and not so richies?

Alan Bain
Bristol, England

Send a Letter

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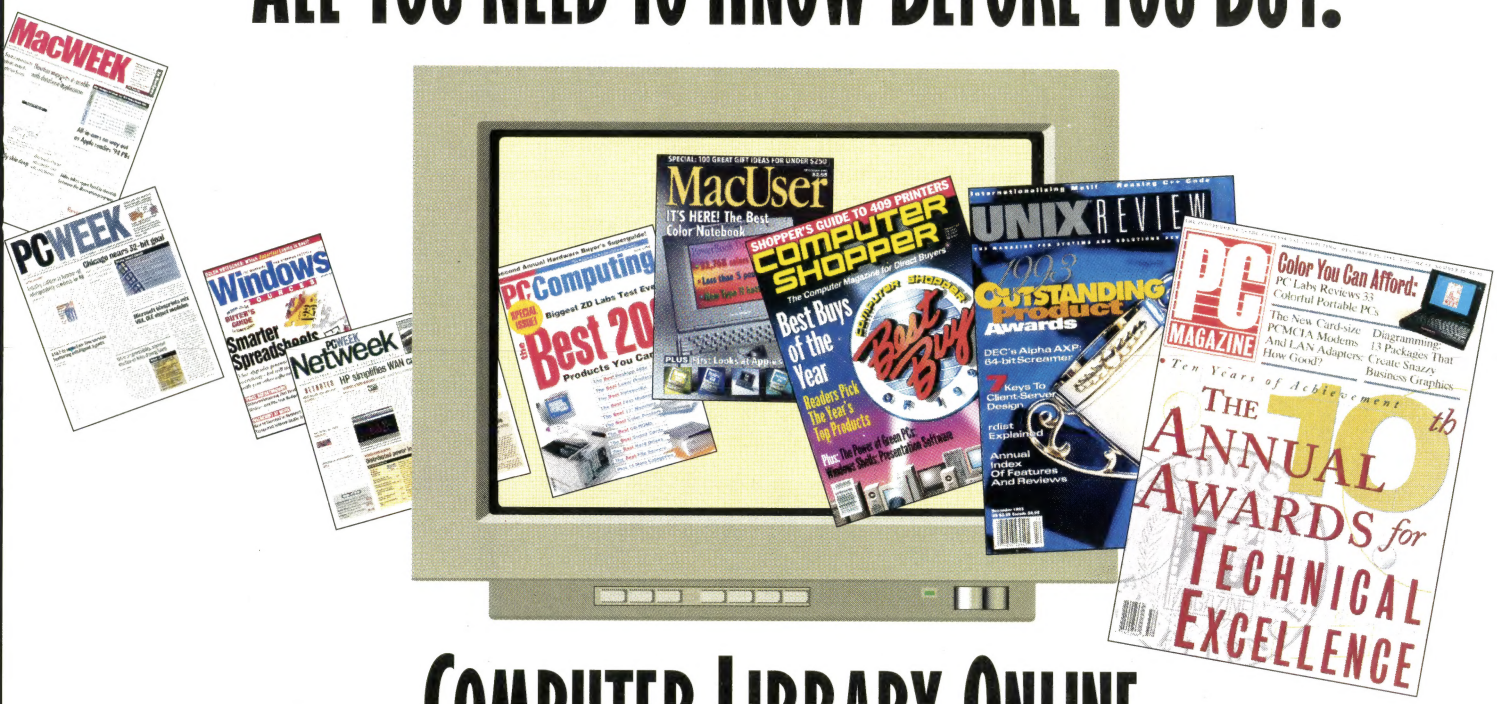

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MONITOR

Just Their 'Type' of Place

From the lofty-sounding title, you might expect musty legal articles on the finer points of fast typing in *The Journal of Court Reporting*. Not so in the December 1993 issue. It celebrated the first anniversary of CompuServe's Court Reporters Forum (GO CRFORUM).

From its pink cover—complete with a birthday cake and candle beside a computer decked out with ribbons, hats and horn-blowers—the eminent journal proclaims that in 12 months the forum had "forever changed court reporting" and billed it as "our profession's other major communications medium." (The first being said journal, of course.)

Richard Sherman, sysop of the Court Reporters Forum, says the forum has shattered the isolation felt by many court reporters. In the old days, reporters worked in offices or courts with peers and colleagues nearby. "But computers allowed much of this work to be done at home, furthering the sense of isolation," says Sherman. "There was little opportunity to learn through the exchange of information with others."

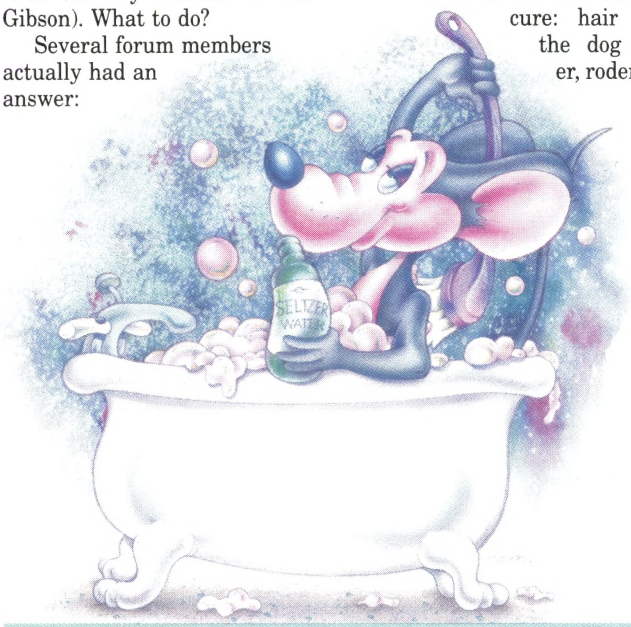
The forum also has fostered a sense of community, which was proved last summer after a gunman opened fire in a San Francisco, California, law firm, wounding a court reporter among others. Within hours of the shooting, messages of concern and best wishes posted in the forum were sent by Federal Express to the hospital where the court reporter was being treated.

"Communication, education and technology are three vital elements to the survival and perpetuation of this time-honored profession," says Sherman. "These three elements converge in only one location in this profession: the Court Reporters Forum."

Dousing the Mouse at 35,000 Feet

The poor fellow visiting the Toshiba Forum (GO TOSHIBA) had just dunked his new detachable laptop mouse into a glass of apple juice ("Uh, I was on an airplane," he explained). The results: "limited cursor movement and a very spongy button" (not to mention a drink that won't ever compete with the dry martini or the Gibson). What to do?

Several forum members actually had an answer: Remove the trackball; dunk the mouse vigorously in room-temperature, unflavored seltzer water for five minutes; take out and repeat with a fresh glass of seltzer; carefully blow out the mechanism with the "canned air" sold in photo stores and dry on a radiator for an hour. Distilled water apparently works, too. It's the usual cure: hair of the dog ... er, rodent.



PAUL MONTGOMERY

Now, the Baud News

It may come as a surprise to some of us nontechie types, but "baud" and "bps" (short for bits per second) do *not* mean the same thing. They can't be used interchangeably either.

"Baud is the rate at which the modem analog signal changes," says Bob Scott, the wireless data development manager for AT&T Paradyne in Largo, Florida, and a member of the Telecommunications Forum (GO TELECO). That is, baud is a measure of the number of times per second that switching can occur in a communications channel, while the baud rate is the transmission speed. So a 1200-bps modem has 2 bits-per-second baud and a baud rate of 600—not 1200.

"Bits per second is the raw rate the user can put out on the telephone line," says Scott. The bps is used to measure the performance of modems, such as 2400 bps or 9600 bps.

Old-timers who swear the two terms are synonymous should take heart. They once *did* mean the same thing. In the old days, when 300-bps modems were a high-tech marvel, 300 baud equaled 300 bps.

"This is why people still get them confused," says Scott. "Much of the terminology developed in the early days and still lingers on."

This Year's Plane Model

Good news. You can now build your own Puddlemaster, Farman Moustique or even a Wong Way Wobbin.

Huh? We're talking about airplanes, *model* airplanes. The Model Aviation Forum's (GO MODELNET) Library 16, "Plans," includes detailed model aircraft blueprints from several leading kit makers, as well as from serious amateur designers.

The library helps modelers keep abreast of the latest developments in model aircraft design. "Very few modelers are going to build a model from these plans, since the wood would cost twice as much as the kit," says Sysop Doug Pratt. "But they can look at the model in detail and decide whether or not they want to buy it."

On the other hand, many forum members will construct models from the library's "scratch built" plans. "These are usually published in magazines and newsletters," says Pratt. "Some eventually become kits, but there are thousands of plans out there. I was lucky to get permission to scan and upload some classic plans from the collection of Col. Hurst Bowers, a world-famous designer of small free-flight and radio-controlled airplanes."

Each plan is available in a fast-download GIF file containing a scaled-down view of the blueprint or a detailed TIF file suitable for building. Then, after some hard work, you too can be the proud owner of an Ace Bingo, Goldberg Mirage or Buhl Sport Airsedan.

Monitor

Contributors: Cathryn Conroy, John Edwards, Lindsy Van Gelder

French WinCIM Released; U.K. Travel Expands

The first French-language version of CompuServe Information Manager for Windows (WinCIM), Version 1.0.4F, is available for downloading in the WinCIM download area (GO WINCIM) for $10 with a matching $10 usage credit.

French WinCIM contains the same features as the English version of WinCIM but also displays extended characters such as accent marks.

French-language support is offered through the Paris Customer Service office (phone number: 36-63-81-31) and in the WinCIM Support Forum (GO WCIMSUPPORT), Section 14, "French WinCIM."

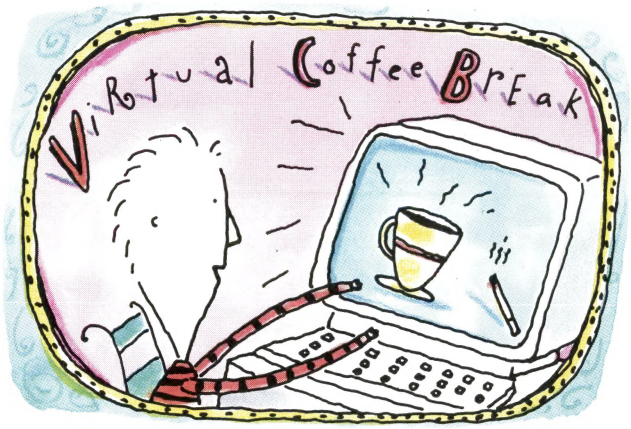
Look for upcoming announcements of a French version of MacCIM in this column.

The United Kingdom Accommodations & Travel Services area (GO UKTRAVEL) now offers four new services from U.K.'s Automobile Association: The AA U.K. Accommodations database describes and rates hotels, bed-and-breakfasts, inns, guest houses and camping sites; AA U.K. Restaurants lists more than 450 of the country's best restaurants, along with descriptions and ratings; AA U.K. Golf Courses contains information on more than 2,000 courses; and AA U.K. Days Out lists more than 2,000 places of interest to visit in the United Kingdom. These U.K. travel services, in addition to Travel Britain Online (GO TBONLINE), are included as part of CompuServe's basic services.

Habit-Forming Fun: Virtual Smokes and Java

Don Leclair is not your typical software developer. Most programmers dedicate their lives to creating useful applications, handy utilities or powerful system enhancements. Leclair does some of that, but he also likes to produce software that's, um ... kind of weird.

Leclair and his associates at Toggle Booleans, an Ottawa, Ontario, Canada-based software publisher, have created offbeat programs that stretch the mind and tickle the funnybone. His work includes the Mouse Odometer (which measures the mileage racked up by a pointing device), the Desktop Cigarette (a virtual butt for smokers who don't wish to offend) and the Bit Recycler (which recycles bits that have become worn out from repeated switching between one and zero states).



AMANDA HALEY

"There are about four of us here who can't seem to stop coming up with ideas along these lines," says Leclair. "Two of us, myself and Kevin Morton, do the programming and the other two go out and buy more coffee." That would explain the Desktop Coffee Mug, which puts a mug of steaming hot java on the Windows desktop.

Leclair says most people get the joke, but some don't. "We've received some quite serious letters about the Bit Recycler from people who have been recycling all day and yet their bits are *still* worn out on the edges."

Look for Leclair's creations in the Windows Shareware Forum (GO WINSHARE) and the Windows Fun Forum (GO WINFUN). Search the forums' libraries using the keyword TOGGLE.

Achy? Tired? Here's Why the Chinese Aren't

Repetitive stress syndrome, chronic fatigue and arthritis are among the debilitating conditions that can be helped by Qi Gong, says Richard Donkin, a member of the Holistic Health Forum (GO HOLISTIC).

Qi Gong (pronounced *chee goong)* is a gentle Chinese exercise that has been reported to help reduce fatigue, strengthen the immune system and improve blood circulation. The discipline is practiced by an estimated 75 million people in China, where there are special Qi Gong hospitals.

Donkin explains, "The basic positions involve bending the knees, imagining you are sitting on a balloon, and either dropping the arms down in front of your body or holding them at roughly chest level, and forming a circle with your hands about a foot apart in front of you."

Donkin performs Qi Gong exercises almost every day for a period ranging from 10 minutes to a half-hour. "It is good as immediate pain relief if I have been overdoing keyboarding or writing and is particularly good if I feel tired or achy in the morning."

To learn more about Qi Gong, read or download Donkin's introduction to Qi Gong in file QIGONG.TXT in the Holistic Health Forum's Library 6, "Chinese/Ayurvedic."

Digging for Clues to a Star's Death

The 1978 murder of television actor Bob Crane, best known for his role on the 1960s sitcom *Hogan's Heroes*, has long puzzled Scottsdale, Arizona, police. Although a suspect finally was arrested in June 1992, there was still one missing piece: the murder weapon.

Investigators at the Maricopa County attorney's office surmised that the weapon was a camera tripod owned by Crane—specifically, a Quick-Set Junior tripod—that was missing from the murder scene. The county attorney needed that make and model of tripod to determine from measurements and other tests if it was in fact the weapon in the nearly 16-year-old case. The company that manufactured the tripod, however, had long been out of business, and the unit had not been sold for more than two decades.

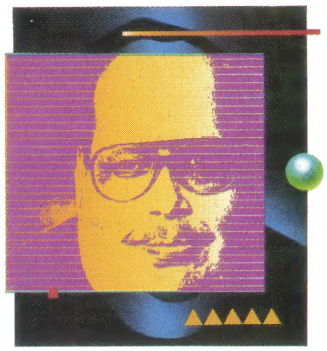
After searching in vain for two years, CompuServe member and investigator Dean Chatfield posted a message in the Photography Forum asking if anyone had one of the old tripods. Within two days, computer consultant and amateur photographer John K. "Kim" Cohan of Carmel Valley, California, provided the vital missing link.

Cohan gave the county attorney's office the tripod's measurements by phone before shipping it to them just in time for the March 10 trial of suspect John Carpenter. Although detailed tests proved that Cohan's tripod was slightly different from the murder weapon, it still will be of valuable assistance.

Chatfield would have preferred to locate the tripod in a less public way, but that wasn't possible. "The electronic medium is fast, and we are able to get immediate responses from it," he says. "Unusual investigations require unusual methods to get things done."

Behind the Screens

with John Edwards



PC Virginity

Do you remember your first computer? Of course you do! A first computer is like a first love: powerful, intense and liable to fry off your eyebrows if you put your hands in the wrong place.

My first system was an "analog computer" for kids, vintage circa 1965. It was supposed to spit marbles into slots representing numeric values. I never could figure out how to work the thing, so I threw a fistful of the marbles at my kid brother's head and poured the rest into the gas tank of a neighbor's station wagon. Yes, I lost my marbles, and a computer writer was born.

My next computer (not to be confused with Steve Jobs' NeXT Computer) arrived in 1981—a Radio Shack TRS-80 Model III. Confident that disk drives were a needless frill and passing fancy, I ordered the machine with audio cassette tape storage. After 1.2 billion unsuccessful data loads, I threw the cassettes at my kid brother's head, melted down the Model III and poured it into the gas tank of a neighbor's station wagon.

Today, as a battle-scarred veteran and respected industry authority, I make my computer choices more carefully. I order only computers sold with the motherboard included, steer clear of "superstores" in former tattoo parlors and *never* buy a computer from a salesman called "Trader Sam."

I also check to see if the marbles are supplied standard.

For more BTS gems by John Edwards, GO OLT-130. Edwards is a contributing editor of CompuServe Magazine. *His CompuServe User ID number is 70007,412.*

Home-Workers Unite to Fight the IRS

Many workers who took a home-office deduction on their 1993 federal income taxes can't do it in 1994. Backed by the U.S. Supreme Court, the Internal Revenue Service ruled in 1993 that unless most of your income is generated from the work you do *in* the home office, you can't take a tax deduction for the office.

However, momentum is gathering for H.R. 3407, a bill pending in the U.S. House of Representatives that would reverse the IRS decision. Sponsored by Rep. Peter Hoagland, a Democrat from Nebraska, and Rep. Nancy Johnson, a Republican from Connecticut, the measure is winning bipartisan support.

If the bill is to pass, more than 200 additional sponsors are needed. Paul and Sarah Edwards, sysops of the Working From Home Forum (GO WORK), are spearheading an

DAVID SESSIONS

A taxing effort: The Edwardses

electronic drive encouraging work-from-homers to write their congressional representatives to express support of the bill and to urge their senators to initiate a similar measure in the U.S. Senate.

"This issue is very important for people who have lost their home-office deductions, but it also demonstrates that home-based businesspeople have some muscle to prevent self-employed individuals from paying disproportionately more taxes than others," says Paul Edwards.

As many large corporations reduce their staffs, many find self-employment to be the only way to find a new job, and starting out at home is affordable. Home-based businesses often grow to become some of the United States' biggest employers, such as Apple Computer, Ben & Jerry's and Hallmark Cards.

"Home businesses need to be nurtured by their government and their communities," says Edwards. "They need to be cuddled, not curdled."

To find out the name and address of your congressional representative and senators, GO GRAMS. Using CompuServe Mail you can quickly send a CONGRESSgram voicing your opinions. A printed copy of your electronically written message is delivered by the U.S. Postal Service. There is a $1 surcharge for each CONGRESSgram sent.

How to Make a Good First, Uh, Impression

It's a place where decisions are always rubber-stamped. But then, so are birthday wishes, party invitations, holiday greetings and just about any other message that can be conveyed on a clean, flat surface. The place is Section 8, "Paper & Stamping," of the Crafts Forum (GO CRAFTS), where rubber-stamp fans rule.

Section Leader Katy Ulrich explains that it's easy to get started in the gentle art of stamping. "The basic tools are an art stamp—that's a rubber stamp with a design on it instead of an address—an ink pad and paper. Then you're on your way to becoming a Van Gogh." The average price of a stamp, available from numerous mail-order suppliers and retail stores, is between $3 and $15.

"With special inks, stamps can be used to decorate fabric, wood and even metal," says member Becky Ericsen, who goes by the handle "Smudge."

LIN WILSON

"You can even create temporary tattoos with child-safe inks."

"The great thing about stamping is that anyone can do it and feel like they're creating with their own particular vision," adds member Sandy Sallin. "Rubber stamps come in designs as prosaic as Mickey Mouse or as elegant as a painting by Raphael, and everything in between."

Ongoing forum projects include stamp design and carving (using rubber erasers). To learn more about stamping, chat with the section's members or visit Library 8, "Paper & Stamping," and browse through the various resource files.

He was on the PC again last night; lately, I never see Bill [sigh]. But if he got me the watch...

I could barely tear myself away...what variety! Over 250,000 items from popular name-brand manufacturers. Not an easy decision, but Marge could really use a microwave.

I hope he found Shoppers Advantage.® *Then he would've saved 10% to 50% off the manufacturer's list price. Not just on watches and jewelry, but toys, tools, furnishings, appliances...*

I just typed GO SAC online. You don't even have to be a member. But when I saw the extra savings they get, I joined. Now I've got a Low Price Guarantee,* in case Marge finds that microwave for less someplace else. And, we've got Automatic Two-Year Warranty Protection!*

Oh no...he probably got me an appliance. Well, he can log back on for that watch any time. This is one store that's truly open at our convenience...

Shoppers Advantage
ON THE ELECTRONIC MALL®

* Full details of our Low Price Guarantee, Automatic Two-Year Warranty Protection, and Membership can be read online.

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GO OLI for more information

FEATURE

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Saying It with Graphics

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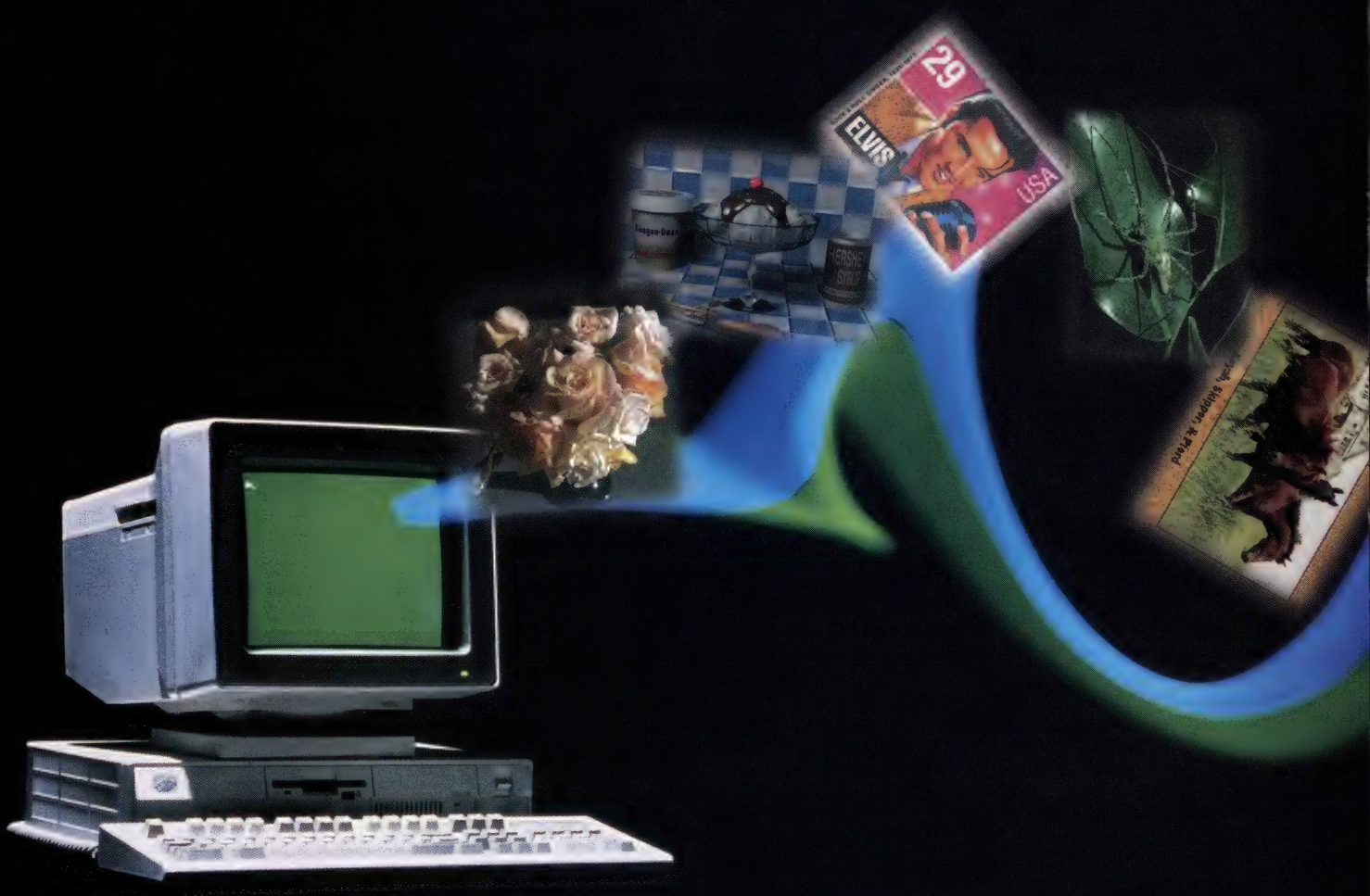


by Andy Rathbone

Sight Onscreen

IMAGE COURTESY OF TONY STONE/KEN WHITMORE

Computer image is everything, say CompuServers who are graphically conveying ideas to one another.

As inexpensive digitizing equipment and faster modems grow more commonplace in the computer world, so does the popularity of computer graphics. In fact, computerized photos and art now appear in the libraries of forums that formerly had little or no graphic interest.

Take, for example, the Gardening Forum. When Carl Short of Harvey, Illinois, couldn't decide how to prune his apple tree, he dropped by the forum for advice. Avid gardener Howard Maculsay answered Short's plea, but the conversation left the two gardeners stumped: How do you describe which branches to prune without seeing the branches?

"Early on, he and I decided that words alone wouldn't get the job done," says Maculsay of Claremont, California. "Maybe we could do some online pruning." Short scanned three black-and-white photos, showing different views of his apple tree, and uploaded them to a forum library. Maculsay put two of the pictures into a paint program and added clip marks, showing Short which branches should be cut. He then uploaded the files for Short's inspection.

Online graphics have become a means for members to share photo albums, seek critical feedback and, like Short, obtain needed information. Indeed, with scanners and paint programs in hand, CompuServe members have taken to converting everything from beer and wine labels to cat portraits into GIFs. GIF (Graphics Interchange Format) files can be viewed on almost any breed of computer with a GIF viewing program (see "How to Retrieve and View Online Images," p. 15). Once uploaded to the libraries, GIFs can be shared with members around the world (see "Uploading a Graphic," p. 13).

Last year the Wine and Beer Forum had a record number of GIF uploads, filling the forum's libraries with labels from bottles as varied as the Rodenbach classic Belgian beer to a 1980 Dom Perignon purchased in Bermuda by a member who questioned its authenticity. Members either soak the labels off their favorite bottles or finagle a sample label from a friendly brewery or winery, then use a scanner and paint program to convert

Andy Rathbone lives in San Diego, California, where he is writing Multimedia for Dummies. *His CompuServe User ID number is 75300,1565.*

Having Fun with Pixel-Twiddling Image Editors

Ever wished you could plop your head onto Arnold Schwarzenegger's body or onto the svelte figure of one of the *Sports Illustrated* swimsuit models? Or paste your family, pet or a favorite inanimate object into the middle of a downloaded GIF's colorful scenery or computer-ray-traced space? It used to be that you'd have to buy a program such as Adobe Photoshop, costing $300 to $800, to play this way, but thanks to the expanding world of shareware image-manipulation programs, photographically goofing on people is affordable.

"It's an area of software that many companies and authors have gotten into. As a result, the programs have gotten cheaper and better," says Robert Voit, author of the $69 Windows shareware program Paint Shop Pro, which is modeled on Windows' Paintbrush and lets a user create, flip, rotate and mirror an image; adjust brightness, contrast and color depth; add special filter effects such as blurring, sharpening and embossing; and save the results out to more than 20 image formats. Voit notes that common uses for his program include cropping, removing undesired image elements (such as the ubiquitous telephone-pole-growing-out-of-a-head syndrome) and other nifty image arrangements that may have unusual consequences.

For silly painting or fine pixel work: NIH Image

"The first thing my dad did with it was scan his wedding album and put together a wallpaper bitmap," says Voit. "Now when my mom sees him at work on the computer, she doesn't get so upset."

Glen Tippets' NeoSoft Corp. makes the DOS-based NeoPaint, which includes an unusual 100-step zoom for high-resolution pixel twiddling; multiple windows; printing to color printers; and charcoal pen, watercolor brush, blend and smudge tools common to much more expensive packages. "With those, I can scan a photo of a person and remove the bags under his eyes."

NeoPaint users tend to just have fun with digital imaging, but serious business abounds as well: "We've heard from a textile manufacturer in Italy creating fabric patterns with NeoPaint, and a company working with the FBI to create criminology art—pasting the noses and eyes on faces," says Tippets.

Photography Forum member Wayne Munn, a technology columnist for the *Journal of the American Society of Picture Professionals*, recommends that image-editing neophytes with access to a scanner try one of these programs to update the family scrapbook. "Scan some of those old images—black and white, color, even tintypes. Using the color-correction and tone-balance types of controls, you can produce some dramatic results," he says. "Those who aren't artistically challenged could try tinting or even colorization, à la Ted Turner."

Munn suggests that if you don't attempt hard-copying your images, an electronic scrapbook created in an image-display program could be shown as a slide show. "Begin work now, and next year you could have the presentation 'running' when relatives visit."

Adds fellow forum member Ron Reed, "Christmas cards, business cards—especially tacky ones—mailing labels, book nameplates and recipe cards all benefit from a good scanner and a bit of playfulness."

Photography Forum Sysop Mike Wilmer monitors discussion in the forum's Digital Imaging section and cautions that intellectual property rights broadly apply to any image you may download from CompuServe, so altering an image and redistributing it as your own—more common now in light of the spread of multimedia—is a no-no. Contacting the uploader by e-mail for permission beforehand is a good idea, he says. "Most people are pretty reasonable about it. Quite often, amateur image hobbyists are just thrilled that somebody's interested in their work."

Following are a few of the image-processing programs available online:

Graphic Workshop—Converts formats and wreaks many special effects. Graphics Support Forum (GO GRAPHSUP), Library 4, "Format Conversion," GRFWRK.ZIP (DOS version: 538,624 bytes) or GWSWIN.ZIP (Windows version: 667,648 bytes).

Matisse in Grey—Fully functional grayscale-only version of the acclaimed Fauve Matisse natural-effect paint program/editor. Graphics Support Forum, Library 5, "Paint/Draw Programs," MATISS.EXE (1,186,213 bytes).

NeoPaint—Powerful DOS-based paint program/image processor with drivers for 300+ printers. IBM Applications Forum (GO IBMAPP), Library 10, "Graphics," NEOPNT.ZIP (627,598 bytes).

NIH Image—Freeware image editor designed for scientific analysis but good for experimentation. Mac Applications Forum (GO MACAP), Library 9, "Graphics Tools," NIHIMG.SIT (276,096 bytes).

Color-It Demo—32-bit paint program/image processor, save and print disabled. Mac Applications Forum, Library 9, CLRIT.DEM (636,160 bytes).

Paint Shop Pro—Popular, award-winning Windows processor. Windows Shareware Forum (GO WINSHARE), Library 10, "General Win Apps," PSP.ZIP (472,254 bytes).

—Christopher J. Galvin

the labels into GIFs.

Cook's Online Forum members post photographs as well as recipes of their creations. Forum Sysop Nicole Novak documented her bi-annual neighborhood party with a picture of the main course: a large pig roasting over a rotisserie custom-built by her husband, a contractor, and his friend, a master metal worker. "It's a gorgeous picture," says San Francisco resident Novak, who also uploaded a picture of the cornmeal honey bread she baked for the occasion.

Not all graphic uploads are meant to be vicariously feasted upon, however. Many are meant to creatively challenge other members. Kim Overholt of Camp Douglas, Wisconsin, wanted to share a "mystery" quilt with fellow quilters in the Crafts Forum. Each month she described a different part of the pattern and had her online quilting friends build the quilt, one square at a time, without knowing what the finished product would look like.

To help get the project started, Overholt drew a picture of her quilt using Micrografx Draw. After copying the image to Micrografx PhotoMagic, she divided the quilt into sections, saving it as a series of GIFs. On the 10th of each month, she uploaded a new GIF to the forum libraries. More than a hundred members downloaded the GIF of the quilt's first piece; six months later, Overholt began receiving messages from quilters who had completed the project.

Gardeners also have uploaded illustrations drawn with paint programs. Angel Cruz of Centreville, Virginia, uploaded four GIFs of sketches she made of a bonsai juniper. Each file shows the plant in different stages of growth, before and after pruning, and with superimposed triangles to show growth goals for its branches. Since the

Cook's Online Forum, Lib. 9, "Breads," NICBRD.GIF

plants are sketches rather than scanned photos, the GIFs are smaller files, taking less time (and cost) to download.

For years, members of the Pets/Animal Forum have uploaded pictures of their pets, from Madagascar Day geckos to favorite horses, dogs and cats. Noting the popularity of GIFs, members Lorraine Shelton and Gayle Hunter decided to hold a "virtual" cat show online. Members entered more than 42 cats. Two members, judges of cat shows in "real life," met in a private online conference room to work out details, then uploaded their comments for the show.

"Everyone got into the spirit of things and treated it like a real show," says Debbie Gates of Vicksburg, Mississippi. "Comments flew about benching assignments, location of litter and who brought snacks." Pictures of the entrants are in Library 12, "Graphics Library," under the keyword VFF, short for Virtual Feline Fanciers.

The flurry of excitement over the cat show led to a virtual horse show two months later, with 93 entries in 38 classes. In the forum's Dog's World section, members are discussing a virtual dog show, complete with movies playable through Video for Windows.

FEATURE

Although scanners and other "graphics grabbers" are commonplace among members of the graphics-oriented forums, they're still rare in other CompuServe forums. Margaret Copeland of Lafayette, California, serves as a "GIF giver" by helping Crafts Forum members who don't own scanners. Last December, 58 members submitted to Copeland photos of handcrafted Christmas ornaments. Copeland converted each photo into a GIF and uploaded it to forum libraries. During the swap, members viewed each others' ornaments, which included origami stars, beaded spiders, Christmas wreaths and even a cross-stitched picture of a computer.

Computer graphics are steadily infiltrating all areas of CompuServe, and they're more popular than ever in the graphics forums. There, the new widespread popularity of computer graphics equipment is causing a graphics boom. Last year's graphics cards displayed merely 256 colors; today's speedier, less expensive models can display millions of colors. When installed in a high-powered computer, the combination has some artists turning away from their traditional paper-based mediums and instead turning on their computers.

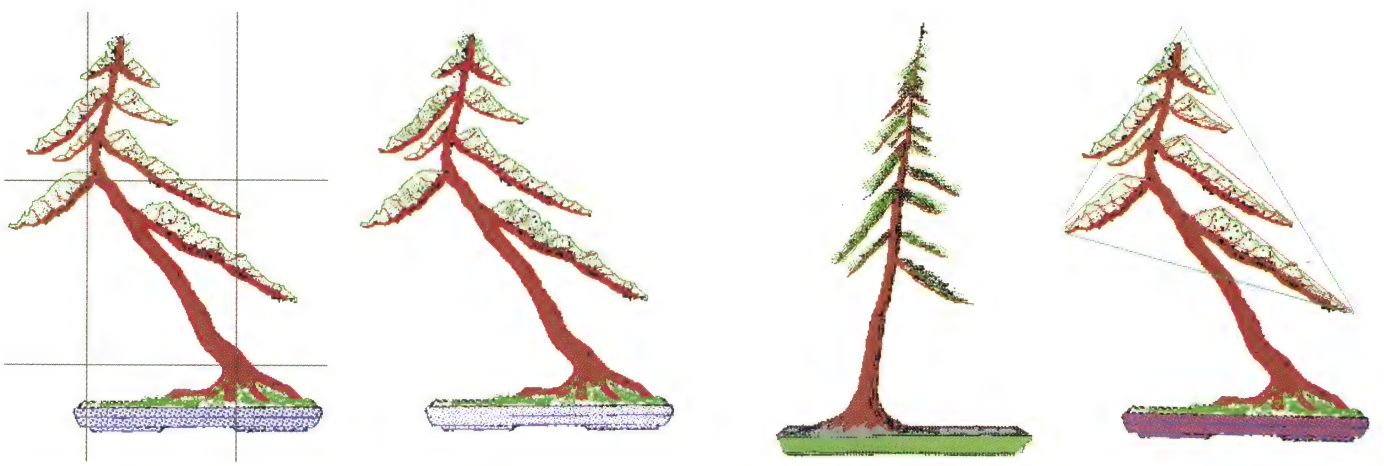
Oconomowoc, Wisconsin, artist Kevin Clark, for example, fantasized about illustrating comic books. Realistically, however, he knew how difficult the comics industry is for a newcomer to crack. So, instead of creating a prototype of his comic on paper and

Uploading a Graphic

Once you've viewed graphics online, you might decide to upload some of your own graphic art. How do you do it? The files and resources in the graphics forums have the answers.

If you're not sure how to get your image into the proper file format, post a message in the Graphics Support Forum (GO GRAPHSUP). Because each brand of scanner uses its own software, directions for creating GIF files differ. By posting a message, you can receive specific instructions from the forum's experienced staff and members for the hardware and software you are using.

In addition, the Introduction to Graphics Tutorial (GO INTROGRAPH) offers help with computer graphics in general, including Option 7, "Uploading to Our Forums," which answers questions about file formats, where to upload, copyrighted material, shareware and protocols. Option 5, "Frequently Asked Questions," covers graphics questions related to the different computing platforms. Finally, file UPLFMT.TXT (8,343 bytes) in the Graphics Support Forum, Library 1, " 'GO GRAPHICS' Help," gives guidelines for uploading files, plus title, keyword and file description requirements.



Gardening Forum, Lib. 7, "Landscape/Trees/Bonsai," BT3RDS.GIF , BTSLNT.GIF, BTSTR.GIF and BTTRIS.GIF

Computer Art Forum, Lib. 17, "Graphic Novels," CHESH1.GIF

mailing it to people in the comics industry, Clark created his comic book, *Cheshire Cat*, on his computer. He uploaded the first page, showing the young hero mixing chemicals in a medieval alchemist's lab, to the Computer Art Forum's libraries. Forum members downloaded Clark's work and offered creative suggestions, such as how to add more action to the scene's backgrounds.

"If I'd drawn *Cheshire Cat* on paper," says Clark, "it would have just laid around the house, and I'd have been the only one to see it. This way, I could draw it on the computer, send it out to people, get an immediate reaction and build from there."

Clark's work caught the eye of Bill Irvine, a Buffalo, New York, artist and founder of Visionary Media Inc., a company that creates interactive multimedia products for schools and libraries. The two struck up a deal, and *Cheshire Cat* is slated for publication this month. "We're taking the comic to a new level," Clark says. "We're adding sound, animation and music, and building it into a larger-than-life comic book—something that paper could never do. *Cheshire Cat* wouldn't have been anything like it is today if I hadn't used the computer."

In the forum, Clark's collection of artwork is called a graphic novel—a loose term for stories told through images and text, using the benefits of the computer. Most of the forum's graphic novels are GIF files that can be viewed like pages from a picture book using any GIF viewer. About a dozen graphic novelists and artists meet in the forum's Graphic Novel section for weekly conferences to discuss the medium and its future.

As the graphic novel concept unfolds, several artists, writers and animators have taken the idea to a new dimension. Instead of creating online books, a group has created an interactive multimedia theater, linking and animating their works to create a theatrical

Copyright 'Can'ts'

Although copyright law is complicated, it boils down to two main rules: First, you can't upload anything that you don't own. Second, you can't download copyrighted images and try to make money from them.

Before uploading a graphic or image, members must have permission from the person or company responsible for creating that image. Or, if the character is licensed—Mickey Mouse, for example—the uploader must have permission from the agency responsible for licensing. This precludes the uploading of images scanned from magazines, newspapers, books, calendars and such sources.

Copyrighted images may be downloaded only for the user's personal use. They cannot be sold. A member can download a copyrighted image to use as Windows wallpaper, for example, but can't sell that image for a friend to use as wallpaper. Alteration and redistribution of the image is not allowed unless the owner grants permission.

The Computer Age has placed copyright law into an ever-changing gray area. For the latest advice, head for Section 17, "Copyright & More," of the Graphics Support Forum (GO GRAPHSUP). There, a workgroup discusses the latest copyright legalities and issues.

Carl Blessing, an artist who has uploaded more than 100 drawings to various forums, doesn't worry that his drawings will be used by others for commercial gain. "But if you have serious concerns that someone will steal a graphic you created and use it without compensation or attribution, then don't upload it," he says.

—*AR*

NEAL DAVIS

His company takes comic books to a new level with animation and sound: Irvine

How to Retrieve and View Online Images

Downloading and viewing online graphics is a simple process with the right hardware and software.

It begins with a "viewer" or "decoder"—a program needed to turn those graphic bits and bytes into an image on your screen, much like a word processor is needed to write text. Although the data for the image may be on your hard disk, you can't see it without a viewer.

A wide range of viewers is available in the Graphics Support Forum's (GO GRAPHSUPPORT) Library 3, "GIF Viewers." Each is designed for a specific type of computer and video display. Although some are free, most are shareware programs, which obligate users to pay a small fee and register the program with the author after an evaluation period.

Some decoders and viewers allow images to be converted to different graphics file formats, such as GIF, BMP, JPEG, PCX, TIFF, Targa, ANSI, IFF and PICT. In addition, special software in the Graphics Support Forum's Library 4, "Format Conversion," and Library 10, "GIF Tools," decodes GIF data for specific purposes, such as converting between formats or analyzing graphic data for errors.

To view most of the graphics on CompuServe, you need a video display with 640 pixels across by 480 pixels tall in 256 colors (known as 640x480x256). Most SVGA cards for IBM-compatible computers and higher-end video cards for the Macintosh easily handle these requirements. For the best results, Windows users must have the right drivers installed for the specific type of card in their computers. Most viewers and decoders also can display images on systems with lesser capabilities, but the quality of the image is lower.

Detailed explanations complete with tips and techniques on downloading and viewing CompuServe's graphics are available in the Introduction to Graphics Tutorial (GO INTROGRAPH). This online tutorial offers an overview of the graphics-related forums, gives an introduction to GIF files, offers tips on how to find the images you want, explains how to upload images, offers help with popular software programs and answers frequently asked questions.

Downloading and viewing images gets easier with practice. Here are some tips for beginners from Graphics Support Forum experts Matt Drury, Lily Owens and Tom Price:

- Make your first stop the Introduction to Graphics Tutorial. Reading this before you try to download an image will help you use your online time efficiently.
- Learn the specific graphics capabilities of your computer.
- Choose a viewer or decoder that is designed for your computer and video display and matches your computer's graphics capabilities. Rather than selecting a viewer randomly from the Graphics Support Forum's Library 3, first leave a message in Section 3, "GIF Viewers," asking for recommendations. Be sure to state in your message the computer and video card you are using.
- It's better to have a selection of software tools for handling downloaded images, including viewers, converters and printing programs, that do specific jobs well rather than to rely on one program that tries to do it all. Browse the Graphics Support Forum's libraries to find software that best suits your needs.
- Become familiar with the standard image descriptions used in the forum libraries so you can select images compatible with your computer's characteristics.
- Use communications software designed for CompuServe, such as the CompuServe Information Manager, TAPCIS, OzCIS, Navigator and CSNav. These programs use CompuServe B protocol, which assures fast, error-free downloading.
- The best time for downloading is when online activity is light, especially after midnight, Eastern time. The transfer will be faster then, saving you money in connect-time charges.
- If you prefer to view the images online and not download them for offline viewing, use CIM. Viewing images online takes a bit longer than downloading, but you can see the image as it comes in and halt the transfer if you don't like it.
- If you have questions not covered in the online tutorial or you encounter a problem, leave a detailed message in the Graphics Support Forum. For the best response, be sure to include the type of computer, video display and software you are using.

—Cathryn Conroy

presentation called the Electronic Theater and Revue. Playable using IBM's presentation software, Story Teller, the Electronic Theater and Revue's online demo file contains jumping crayfish with television heads, city officials testing robots and other equally wacky animation. Far from being a closed production, the theater's doors are open to other artists. "I hope to attract traveling artists that will entertain us with everything from lampoon to burlesque," says Sysop Lily Owens of Yorktown, Virginia. "More and more talented people are coming online and looking for interactive places to 'play.' This is the real meaning of interactive."

Some forums regard their libraries' images with more of a scientific interest. Michael Goodrich studies the weather, both as a hobby and as weatherman for KVOA-TV in Tucson, Arizona. When he's not predicting weather for television viewers, Goodrich explains the clouds to his friends on CompuServe. He captures weather satellite images with his home computer and uploads the most interesting pictures to the Quick Pictures and Space forums. Each file contains Goodrich's comments describing cloud patterns or potential storms shown in the graphic. "I just do it for fun in the hope that people will get more meaning out of the satellite cloud pictures they see on television," Goodrich says.

FEATURE

Another weather watcher, Capt. Bob Cook, keeps an eye on the weather from a Tartan '37 in Naples, Florida. Twice a day, Cook fires up his onboard computer, dials up CompuServe with a cellular modem and checks his e-mail. While online, he visits friends in the Sailing Forum, then heads for the online weather charts. Cook uses Weather Pro software to grab and study the latest weather maps. During hurricane season, he turns to a hurricane-tracking program to study and plot any pending weather trouble, especially when he's cruising through the southeast corner of the United States. "I was down there when Hurricane Andrew came through," says Cook, "and knowing where the hurricane was and where it was going was invaluable in protecting my boat and crew."

Other sailors in the Sailing Forum aren't watching the weather as much as they're watching the latest Whitbread 'Round the World Race. Every four years since 1973, Whitbread, a United Kingdom-based company specializing in beer, food and leisure, has awarded the Heineken Trophy to the first boat to sail around the world in its organized competition. As 16 boats compete in the current race, skippers in the Sailing Forum track the boats' progress by downloading maps from forum libraries. Stored as GIFs, the Whitbread maps show each boat's progress as it passes five continents in the nine-month journey spanning 32,000 nautical miles. Each boat contains a laptop computer connected to a special onboard transmitter. "All the positioning information is via a compact (the size of a hard-bound James Michener novel) SatCom-C unit hard-wired to an internal GPS satellite positioning system on each boat," says Sysop Keith Taylor of Marshfield, Massachusetts. The computer transmits each boat's current position, and the information

Graphics Gallery Forum, Lib. 1, "New Uploads," SPIDR.GIF

Graphics Gallery Forum, Lib. 1, "New Uploads," MANTID.GIF

GRAPHICS COURTESY OF THE SMITHSONIAN INSTITUTION

Graphics Forums' Smithsonian Connection

Whether in cold storage or in an online forum, the photographs Jim Wallace handles are well-preserved for future viewing. As the director/curator of the Smithsonian Institution's Office of Printing and Photographic Services, Wallace oversees the photographic work for some of the Institutions's principal museums—American History, Natural History, and Air and Space—as well as for the Tropical Research Institute in Panama. He uploads hundreds of his staff's photos to the Graphics Gallery Forum (GO GALLERY).

Those GIFs are primarily of objects from the museums—such as the Hope Diamond, an Apple I computer from 1970 and a cabinetmaker's toolbox from the 1800s—or documentary photos chronicling such events as U.S. President Clinton's inauguration, U.S. Supreme Court Justice Ruth Bader Ginsberg taking the oath of office and the pandas playing at the National Zoo in Washington, D.C.

Wallace chooses the images based on what he thinks will interest members, such as new exhibits at the museums or key events. From time to time, he gets member requests. "I had someone ask for GIFs of firetrucks and firefighting apparatus. We located some that we were able to scan and post. We also had a couple of cases in which students doing term papers needed particular photographs," he says.

Without going into a laboratory, making duplicate photos and sending them through the mail, Wallace can quickly distribute large numbers of files, thanks to the online GIF medium. However, he looks forward to providing the images in greater context. "The GIF89A format allows for attaching a caption. That's a very good first step. The next step will be delivering full multimedia in which you have pictures, sound and text," he says. He and his staff are experimenting with Adobe Acrobat format files and hope to upload a photo series in that format soon.

With the development of ever-faster file-transfer technology—increasing modem speeds and cable modems—Wallace says online multimedia will no longer be hindered by large file size. He foresees a day when "we're all plugged in with modems into our local phone systems, and delivering files that are a couple megabytes in size is no big deal."

—Cary Roberts

ends up in London on a computer run by BT Communications, one of the race's sponsors.

Twice each day, Brion Lutz in Havre De Grace, Maryland, calls London using BT Communications software. While online, Lutz captures a map showing the Whitbread boats' current progress; he converts the image to a GIF file and uploads it to the forum libraries. Lutz has uploaded more than 100 GIFs, usually smaller than 15K. Some files have attracted more than 300 downloaders, including Lothar Goegglemann, a software developer for IBM in Boeblingen, Germany, who regularly downloads the Whitbread GIFs and inserts them into a WordPerfect file. Goegglemann creates a chronological sequence of the race news, complete with the race positions as tables and the maps showing the boat's position at each point. He then shares the file with friends at his sailing club in southern Germany.

Goegglemann installed WordPerfect just before the race and chose the race as a good way to become familiar with how the program handles large files and graphics. "I didn't want to do the boring examples that come with the product," he says.

While some CompuServe members upload computerized pictures to illustrate messages or to demonstrate a new graphics technique, others upload for a much simpler reason: "After a few years, you want to see what your best buddies look like," says Novak of the Cook's Online Forum. "GIFs solve that problem nicely." Section 17, "Potpourri," of the Cook's Forum includes photos of dozens of its members, often taken at the forum's group gatherings. The digitized face of the forum's Cook of the Month peers from the libraries, as well.

Many members also upload graphics to get feedback on their work. Robert Gorrill of Squantum, Massachusetts, and other photographers in the Photography Forum regularly download each other's files for comment. "It's a joint venture between several of us to offer constructive criticism," Gorrill says, "and to get a bit of lively feedback and discussion going about these images."

Bronx, New York, resident Milton Teruel, known as Uncle Milty in the Comics/Animation Forum, treats the forum as an art

Crafts Forum, Lib. 13, OR9301.GIF

Graphics Developers Forum, Lib. 9, "POV Images," SUNDAE.GIF

gallery—a showcase for his work. "It's a good way to allow people to see what you can do or what you are currently doing. Any feedback is welcome and allows for a discussion of work in progress or art styles in general," says Teruel.

David Hofmann of Ottobrunn, Germany, regularly visits the Graphics Developers Forum to share his graphics work with other members. "When you have made something good, no matter what, you want to show it to others," says Hofmann. "You want to hear what others think about it, what could be made better."

Hofmann and several other forum members create ray-traced images—computer-generated pictures realistic enough to pass for photographs. Ray-tracing requires a special programming-like language that lets users describe objects and their surfaces: color, texture, reflection and transparency. After creating a text file describing the object, the ray-tracers tell the computer where to position the light sources, as well as the angles it should use for snapping its "picture." The ray-tracing program subsequently reads in the user-created description of the object, creates the image in memory and shoots rays through it, tracing the image's characteristics, pixel by pixel.

The popular freeware program Persistence of Vision Raytracer (POV-Ray), available in the forum's libraries, can create ray-traced scenes with realistic shadows, reflections and other lighting effects. Although the creation may look like a quickly snapped photograph, the process typically takes 10 to 20 hours. Member Robert Mickelson of Melbourne, Florida, says his ray-traced image of an ice cream sundae took 85 hours to render. Many members use the ray-tracing program's "auto-resume" feature, letting their computers work all night.

Do any of the downloaders throw eggs? Rarely. In fact, most uploaders seldom receive any feedback at all, positive or negative. But just because an uploader doesn't receive praise, it doesn't mean the image is unappreciated, says Graphics Developers Forum Sysop Dan Farmer of Bloomington, Minnesota. "It's difficult to get constructive criticism, especially based on the large number of uploads to forum libraries."

To keep up with the multimedia crowd, CompuServe's GIF standard underwent an update late last year. The GIF format had always been a popular way to easily share graphic images between different brands of computers. Now, Jamie O'Connell, sysop of the Sight and Sound Forum, has created a way for a single GIF file to contain more than one image, as well as recorded sound and MIDI music. A Windows player for the new multimedia GIFs—as well as a way to package the files—can be found in the forum's libraries.

O'Connell foresees many uses for the new GIF standard, "I see people using it for entertainment: family picture albums with music and sounds, homemade ray-traces illustrating a musical work, photos of a favorite guitar along with a digital sample of someone playing it. There are a lot of possibilities here." The MM-GIF standard also can be used as a business presentation tool, using slides of images and text along with sound and music.

Although graphics are showing up in forums across CompuServe at a record rate, many members predict they'll show up even faster in 1994. As more and more CompuServe members buy multimedia computers or compact disc players, they'll have access to Kodak Photo CD technology—a method of transferring standard 35mm camera film onto a compact disc. "We're on the forefront of an explosion of GIF images contributed by members—both amateur and professional—who base their material on the Kodak Photo CD," says Matt Drury, chief sysop of the graphics forums. "As the format becomes more popular, anyone with a 35mm camera has access to a scanning service as close as the local film developer. The format offers flexibility for both the end-user and our forums."

FEATURE

When gardener David Kell of Chesapeake City, Maryland, took snapshots of his roses to be developed, he had the images transferred to a Kodak CD, for viewing on his computer. From there, he converted the image to a GIF and uploaded it to the Gardening Forum. Before Kodak technology, he had to use a scanner or a camcorder and a video-capture board to convert images to GIFs.

Although Kodak CD can be convenient for Gardening Forum members to convert their pictures to GIFs, Kell says most members will continue to swap photos through the U.S. Postal Service, not through the libraries. "Many people do not have the high-resolution monitors and video boards required to view the images," he says. "And there are those who simply are more comfortable looking at photos mailed to them than images on screen. It will be interesting to see which image—electronic or photo—will be preferred by children growing up in the multimedia age."

Pets/Animals Forum, Lib. 12 "Graphics Library," MCDUFF.GIF and MCILRE.GIF

A CompuServe Graphics Directory

Looking for graphics on CompuServe? You can start in the following forums with image and graphics-related files suggested by forum staff. Vendor forums and others not listed here may also offer graphics. To determine if a forum contains image files, search its libraries for uploads with GIF and JPG extensions (CompuServe Information Manager users can enter *.GIF or *.JPG in the File Name dialog); alternately, search using the keywords GIF, IMAGE or GRAPHIC.

For more information on graphics in general, check out the Introduction to Graphics Tutorial (GO INTROGRAPH). For a menu of official graphics forums, GO GRAPHICS. If you are unable to locate a file listed in this directory, post a forum message to SYSOP or ALL.

IMAGE COLLECTION

FINE ART (GO FINEART)

African landscape. Library 14, "Kunstdruckhandel," JOHN03.GIF (198,741 bytes).

Sauber Mercedes C 9 racing car. Library 14, KUNS17.GIF (234,258 bytes).

GRAPHICS CORNER (GO CORNER)

Leeds Castle in pastoral Kent, England. Library 3, "Hall of Fame," LEEDS.GIF (246,014 bytes).

The Providers, a pen-and-ink drawing inspired by music, "Night on Bald Mountain." Library 8, "Fantasy & Sci-Fi," MORY05.GIF (130,420 bytes).

GRAPHICS GALLERY (GO GALLERY)

Aerial view of the U.S. National Mall. Library 7, "SI: People/Places," MALL.GIF (171,094 bytes).

Boeing Space Station. Library 8, "NASA: Man in Space," SPC01.GIF (110,983 bytes).

GRAPHICS PLUS (GO GRAPHPLUS)

Warriors battle to rescue heroine. Library 3, "Hall of Fame," SPELL7.JPG (186,253 bytes).

High tide at Rinsea Beach, Cornwall, United Kingdom. Library 3, RINSEA.JPG (90,439 bytes).

QUICK PICTURES (GO QPICS)

Scanned pen-and-ink allosaurus. Library 6, "Animal Kingdom," ALLOSR.GIF (39,868 bytes).

Three dogs: an Akita, a sheepdog and a bichon frise. Library 6, DOGS2.GIF (28,315 bytes).

GRAPHICS SUPPORT

GRAPHICS SUPPORT (GO GRAPHSUP)

Windows multimedia viewer/image utility. Library 3, "GIF Viewers," VIDVUE.ZIP (342,359 bytes).

'Swiss Army knife' of wallpaper tools, WinWall Plus. Library 14, "Misc. Util & Code," WWPLS.EXE (539,828 bytes).

GRAPHICS VENDOR A (GO GRAPHAVEN)

Play/D application programming interface kit lets programs play standard MIDI files. Library 3, "Grasp," PLAYD.ZIP (131,260 bytes).

MetaWindow C and Pascal Graphics library demo. Library 12, "Metagraphics," METADE.ZIP (235,490 bytes).

GRAPHICS VENDOR B (GO GRAPHBVEN)

Cartoon of a galactic space cruiser's console. Library 4, "Animated Software," SPACED.ZIP (190,410 bytes).

SVGA Animated Mechanical Pumps demo. Library 4, PUMPS.ZIP (373,428 bytes).

IMAGE DEVELOPMENT

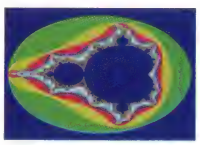
COMPUTER ART (GO COMART)

A dark city alley. Library 14, "Beginners' Studio," ALLY40.GIF (62,989 bytes).

Scanned Monet oil painting of a sailboat under a bridge. Library 16, "Young Artists," EKB1MO.GIF (198,384 bytes).

GRAPHICS DEVELOPERS (GO GRAPHDEV)

Working model of the Schadewald Gravity Engine on display in the Museum of Nonexistent Artifacts. Library 3, "Hall of Fame," SGE.GIF (193,112 bytes).



Winfract 18.21. fractal image generator. Library 4, "Fractal Sources," WINFRA.ZIP (506,697 bytes).

SIGHT & SOUND (GO SSFORUM)

Public-domain release of VIDPAK digital video system. Library 2, "Animation Library," VDOPUB.ZIP (741,036 bytes).

Blaster Master 5.95. Shareware. Library 9, "Sound Card Library," BMSTR5.ZIP (278,858 bytes).

OTHER FORUMS

ASTRONOMY (GO ASTROFORUM)

Color image of Mars. Library 13, "Orbiting Space GIFs," MARS.GIF (187,520 bytes).

String-of-Pearls comet. Library 13, PEARL3.GIF (48,048 bytes).

AUTODESK SOFTWARE (GO ASOFT)

CAD factory model, 3DS rendering. Library 3, "Autodesk 3D Studio," FACTRY.GIF (156,269 bytes).

Toy fire engine, 3DS rendering. Library 3, FIRENG.GIF (119,494 bytes).

AUTOMOBILE (GO CARS)

1994 Ford Mustang. Library 3, "Car Buying," 94FRDM.GIF (133,434 bytes).

1964 A.C. Cobra. Library 11, "Collector's Corner," 64COBR.GIF (145,271 bytes).

AVIATION (GO AVSIG)

Rolls Royce Spitfire. Library 11, "Fly-Ins/Graphics," SPIT1A.GIF (145,200 bytes).

Sunset approach to runway at Florida airport. Library 11, PM-APP.GIF (478,864 bytes).

CALIFORNIA (GO CALFORUM)

View from Golden Gate Bridge Highway. Library 6, "SF Bay Area," GGBRID.GIF (56,630 bytes).

Emerald Lake. Library 16, "Central California," EMRDLK.GIF (170,204 bytes).

COLLECTIBLES (GO COLLECT)

Elvis Presley stamp. Library 2, "Stamps and Covers," ELVIS.GIF (52,764 bytes).

Chief John Big Tree collector's card. Library 8, "Telecards," CHIEF.GIF (47,074 bytes).

COMICS/ANIMATION (GO COMICS)

Cover and first 10 pages of a graphic novel created for the forum. Library 14, "Comic Art GIF Files," NECR01.GIF through NECR10.GIF (approx. 15,500 to 40,500 bytes each).

COOKS ONLINE (GO COOKS)

Whole roast pig on the spit. Library 6, "Meat-Poultry-Fish," NICPIG.GIF (110,370 bytes).

Basket of breads. Library 9, "Breads," NICBRD.GIF (130,776 bytes).

CRAFTS (GO CRAFTS)

Stained glass panel. Library 9, "Glass/Clay/Ceramics," FRCTAL.GIF (138,975 bytes).

Polymer clay jewelry. Library 12, "All Other Crafts," AGEE3.GIF (33,792 bytes).

DINOSAUR (GO DINOFORUM)

Flying pterodon. Library 3, "Graphics/Artists," PTEROD.FLI (398,407 bytes).

Tyrannosaurus rex is ready for dinner. Library 3, "Graphics/Artists," TYRAN.GIF (46,910 bytes).

FLORIDA (GO FLORIDA)

Disney World's Cinderella Castle. Library 14, "Graphics Gallery," CASTLE.GIF (107,057 bytes).

Space shuttle lifting off. Library 14, BLASTO.GIF (27,776 bytes).

FLORIDA TODAY (GO FLATODAY)

Space shuttle Endeavor launching on the Hubble Space Telescope repair mission. Library 1, "Space," LIFTOF.GIF (159,449 bytes).

Space shuttle Atlantis launching into space. Library 1, ATSTRE.GIF (109,076 bytes).

GAMERS (GO GAMERS)

Return to Zork maps in BMP, GIF and WMF formats. Library 2, "Adventure Games," RTZMAP.ZIP (134,768 bytes).

Doom maps in GIF format. Library 7, "Action/Arcade Games," DOOMMA.ZIP (38,687 bytes).

GARDENING (GO GARDENING)

Series of Bonsai training GIFs. Library 7, "Landscape/Trees/Bonsai," BTTRIS.GIF, BTSTR.GIF, BTSLNT.GIF, BT3RDS.GIF (approx. 6,000 to 10,000 bytes each).

GENEALOGY (GO ROOTS)

Lt. Gen. Nathan Bedford Forrest. Library 13, "Graphics Files," NBFORR.GIF (116,991 bytes).

Logo of the Scottish Clan Little Society. Library 13, LITSOC.GIF (8,374 bytes).

HAMNET (GO HAMNET)

GIF map of 10,368 DX stations. Library 6, "Software & Pictures," DXMAP.GIF (19,494 bytes).

GIF map of U.S. amateur radio operator population by ZIP code. Library 6, HAMZIP.GIF (17,890 bytes).

MENSA (GO MENSA)

Star Trek's Chekov at Mensa meeting. Library 14, "Inside Mensa," CHEKOV.GIF (230,233 bytes).

Isaac Asimov at a New York Mensa gathering. Library 14, ISAAC.GIF (250,291 bytes).

MODELNET (GO MODELNET)

Half-size plans for the Mirage 550 electric trainer from Carl Goldberg Models. Library 16, "Plans Library," MIRAGE.GIF (160,742 bytes).

Scaled-down view of the Staggerwing biplane from Ace RC. Library 16, STAG.GIF (43,757 bytes).

MILITARY (GO MILITARY)

U.S.S. Arizona Memorial. Library 12, "Military Graphics," DM52.GIF (157,944 bytes).

Looking toward Mutters Ridge in Vietnam. Library 12, DM47.GIF (173,479 bytes).

MOTOR SPORTS (GO RACING)

Parade lap at the 1993 Indy 500. Library 4, "PPG/Indy Cars/Lites," 93INDY.GIF (1,088,549 bytes).

F189 Ferrari Grand Prix racer car. Library 11, "International/F-1," FERRI.GIF (58,014 bytes).

MUSIC VENDORS (GO MUSICVEN)

Group picture of Guns N' Roses. Library 11, "Geffen Files," GNR.GIF (56,227 bytes).

Elvis Presley circa 1960. Library 12, "RCA Records," ELVISY.GIF (126,554 bytes).

NEW AGE (GO NEWAGE)

Hindu God at sunset. Library 5, "Graphics and Art," KALI.GIF (108,008 bytes).

Wall carvings of Isis and Horus in Egypt. Library 5, ISIS.GIF (113,722 bytes).

OUTDOORS FORUM (GO OUTDOORS)

200-pound mako Shark jumps at boatside. Library 4, 1JR017.GIF (323,963 bytes)

Sunset Over Canadian lake. Library 4, 1JR031.GIF (344,306 bytes)

PETS/ANIMAL (GO PETS)

Pancho, voted Best Household Pet Kitten at Virtual Cat Show. Library 12, "Graphics Library," PANCHO.GIF (258,679 bytes).

Jessie, an 11-month-old terrier. Library 12, JESSIE.GIF (138,817 bytes).

PHOTOGRAPHY (GO PHOTOFORUM)

U.S. Capitol, Washington, D.C. Library 8, "GIF/Manmade Things," CAPIT2.GIF (275,246 bytes).

Sailboats in morning light. Library 8, SAILSG.GIF (148,281 bytes).

REUTERS NEWS PICTURES (GO NEWSPIX)

GIFs rotate. Popular libraries include Library 2, "United States GIFs," Library 3, "World GIFs," and Library 6, "Sports GIFs."

ROCKNET (GO ROCKNET)

Grateful Dead T-shirt GIF. Library 7, "The Dead," NETHEA.GIF (38,717 bytes).

Grateful Dead startup screen in GIF format. Library 7, STEALI.GIF (113,028 bytes).

SAFETYNET (GO SAFETY)

Police finger print card. Library 0, "GIFs/Graphics," FPGRSC.GIF (123,649 bytes).

Car striking building. Library 0, VEHBLD.GIF (33,457 bytes).

SAILING (GO SAILING)

Dramatic boat rescue during Whitbread yacht race. Library 17, "Whitbread Race," SOS1.GIF, SOS2.GIF (approx. 9,500 bytes each)

Whitbread positions at end of second leg. Courtesy of BT Communications. Library 17, LEG249.GIF (14,611 bytes).

SCIENCE FICTION & FANTASY (GO SCI-FI)

Rendering of the forum's electronic "hot tub" area. Library 7, "ConSuite/Pic Gallery," TUB.GIF (6,656 bytes).

Artwork for forum T-shirt. Library 7, SKIFFY.GIF (82,003 bytes).

SCUBA (GO SCUBA)

Anemone mouth. Library 14, "Pics & Graphics," ANEMTH.GIF (185,255 bytes)

Balloon fish. Library 14, BFISH.GIF (208,826 bytes).

SENIORS (GO SENIORS)

Snow-covered mountains. Library 10, "GIFs/Graphics/Images," SNOW.GIF (38,374 bytes).

Stained glass window. Library 10, WINDOW.GIF (47,288 bytes).

SHOWBIZ (GO SHOWBIZ)

Jurassic Park scene shots. Library 9, JRSPK1.GIF (527,607 bytes).

The stars of the U.S. TV show *NYPD Blue*. Library 9, NYPD.GIF (256,881 bytes).

SPACE (GO SPACEFORUM)

Wind tunnel model from Langley Research Center. Library 12, "Space History GIFs," V_WING.GIF (176,032 bytes).

Galileo spacecraft photo of the asteroid Ida. Library 13, "Solar System GIFs," IDA.GIF (114,136 bytes).

TRAINNET (GO TRAINNET)

Locomotive. Library 5, "Photography/Paint," 444901.GIF (228,599 bytes).

New Canadian Pacific paint on an SD40-2. Library 5, CP_660.GIF (211,306 bytes).

TRAVEL (GO TRAVSIG)

Train rushing across old stone facade in Wales. Library 10, "GIF/The Photo Album," CONWY2.GIF (218,246 bytes).

Heian Shrine in Kyoto, Japan. Library 10, KYOT01.GIF (218,493 bytes).

U.K. (GO UKFORUM)

Edinburgh Castle in Scotland. Library 7, "Graphics/Photos," ECSTL1.GIF (141,420 bytes).

London double-decker bus. Library 7, REDBUS.GIF (246,912 bytes).

U.S. NEWS & WORLD REPORT (GO USNEWS)

NASA space station. Library 12, "Photos/Graphics," SPACE.GIF (55,285 bytes).

Photo of U.S. President John F. Kennedy. Library 12, JFK.GIF (106,760 bytes).

by Robert Lauriston

MICHAEL MCLAUGHLIN

The House of Macintosh

The MAUG forums are still the premier source of support, software and shared Mac experience.

From the beginning, Apple has promoted the Macintosh as a breed apart from the crowd of IBM-compatible PCs. In the Orwellian TV spot that announced the new computer to the world during the 1984 Super Bowl, the Mac was symbolized by a female warrior liberating enslaved DOS drones from the thrall of Big Brother. The next year, Apple's "lemmings" ad portrayed DOS users as a herd of suit-wearing zombies walking mindlessly off a cliff.

While these tactics didn't overthrow the "evil empire" (PCs still outsell Macs about 10 to 1), Apple's efforts to set the Mac apart have led customers to see themselves as special, too, and to see their choice of computer as far more than just a simple business decision. Macs aren't just easier to use—they're also proof of their owners' taste, intelligence and virtue.

At least, that's the impression you get from the Mac fans who congregate in CompuServe's MAUG forums. The "M" in MAUG doesn't stand for Mac, but for "MicroNet," CompuServe's original name—the Micronetworked Apple Users Group dates back to the pre-Mac Apple II era. Users gather in MAUG's 12 general-interest, five vendor and two "sister" forums to share advice, get support, retrieve the latest Macintosh programs and utilities, and discuss what's on their minds—which includes not only Mac-related issues but just about everything else, from romance to politics to fashion.

What's foremost in many MAUG members' minds these days is one of the most significant events in the Mac's 10-year history: the arrival of Apple's new Macintosh on PowerPC early this year. Apple is abandoning the 680x0 chip family in favor of a new one developed in collaboration with, and manufactured by, Motorola and IBM.

The PowerPC version of System 7 emulates a 680x0 in software, so applications that use that central processing unit directly think there is one. Many MAUG members already have encountered such hardware emulation in Insignia Solutions' SoftPC, a program that emulates an Intel '286 CPU to run DOS and Windows applications on the Mac—though much more slowly than on an IBM PC. Based on that experience, some MAUG members worry that Macs on PowerPC will have similar performance problems. As Brian Barjenbruch, a member of the Mac Hardware Forum, put it, "I'll be

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COMPUTING SERVICES

CM's Computing Services Credo: Exceed the speed limit, boost power, refresh your memory, squash bugs ... from bootup to shutdown, our global tech team helps you get with the program.

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▼
Spreadsheet Printing, p. 26

damned if I'm going to switch from my Quadra 610 to something that probably runs my software only half as fast!"

While the first Macs on PowerPC will be slower than some '040 Macs when running old programs, the payoff is that they'll be much faster when running native applications (programs compiled to run on the new CPU). Such applications will be far faster than current Mac applications, according to Macintosh Hardware Forum Sysop David Ramsey. "Specular International had its 3-D modeling program, Infini-D, running on a Quadra 900 and PowerPC side by side at the January MacWorld in San Francisco. I'd say the PPC version was about four times faster."

MAUG members still are debating the merits of Apple's Quadra 840AV, the fastest '040 Mac yet, and the 660AV. These Macs include a digital signal processing chip —essentially a second CPU—that lets them do such operations as QuickTime video capture, CD-quality digital audio, speech recognition and voice mail without the additional hardware other Macs would require. This is appealing to users who need such capabilities, and users who have bought the AV Macs generally seem impressed with their performance. In addition, Apple recently announced that the AV Macs' future includes an upgrade path to the Macintosh on PowerPC.

One more new system contributing to the MAUG forums' threads is Apple's MacTV, a product that does double-duty as a low-end '030 Mac and a TV set. Many MAUG members think the product makes no sense, since it costs more than a faster Mac plus a regular TV set purchased separately, but MAUG member George Slusher, a retired Air Force lieutenant colonel from Santa Maria, California, thinks the box will be useful in cramped living quarters. "My MIT dorm room was 12 feet deep and as wide as a twin bed. The MacTV makes perfect sense in that case."

Given this confusing array of choices, it's not surprising that many MAUGers are postponing hardware upgrades until after the dust settles from the PowerPC introduction. As Ramsey points out, "If you don't need the AV features, you might as well wait," since even users who eventually decide not to buy Macs on PowerPCs should benefit from post-rollout price cuts on older models.

The PowerPC is also partially responsible for the recent major topic of conversation in MAUG's Macintosh Developers Forum. The MAUG community's programmers would have been excited about Metrowerks' Code Warrior programming development environment in any case, given that beta-testers

MAUG Life Story: Doffie Hochreich

Doffie Hochreich, a psychology professor at the University of Connecticut, finds her thrills with new Macintosh utilities.

"Any software that finds some speedy or neat or sexy way of navigating, launching, automating or customizing my Macintosh gives me the sort of thrills and chills that normal workaday computer users cannot understand," she explains.

Hochreich bought her first Macintosh on Sept. 22, 1989, a date she will never forget. She chose it over a PC because the Mac was beautiful. "Not a very sophisticated criterion for such an expensive purchase, perhaps, but I still believe this to be true," she says, noting she instantly went "hardcore," using her Mac for everything from graphics to games.

The next step was a subscription to CompuServe, where Hochreich sought expert help in the MAUG forums. She uses CompuServe Navigator™ for the Macintosh to get on- and offline quickly while capturing forum message threads, including those about new software and hardware, operating systems and hints on baffling Mac games.

"Navigator allows me to search for new files in selected libraries. When I see one I'd like to have, such as a shareware utility, desk accessory or updates to a virus-detection program, I check it off and automatically download it during my next online session," she says. Every few months

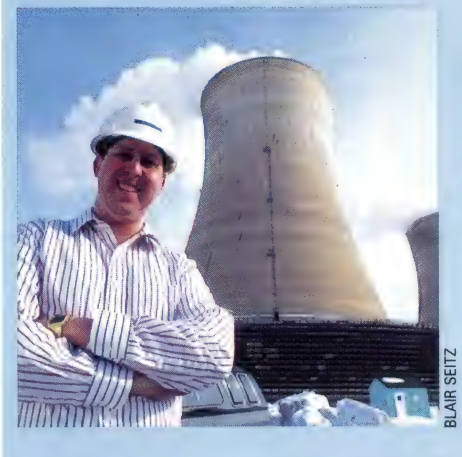
LARAMIE PHOTOGRAPHY

Hochreich downloads the updated HyperCard index that contains a listing of all of the files in the MAUG forums. She then uses it to do keyword searches to find specific programs.

Hochreich also knows she can turn to MAUG in times of need. When her husband nearly drove himself crazy trying to remember the title of a particular science-fiction novel, Hochreich posted a message in one of the MAUG forums. "Within 50 minutes, three people provided the name and author of the novel," she says.

—Cathryn Conroy

MAUG Life Story: Barry Fox



BLAIR SEITZ

Barry Fox is one of those computer wizards who can figure out how to use almost any new software without reading the manual. An avid Apple IIgs user, despite the machine's orphan status, Fox has logged onto bulletin board systems and CompuServe for more than 10 years.

A "utilities freak," Fox downloads and tries nearly every utility almost as soon as it is uploaded to one of the three Apple forums. But his favorite way to learn more about his beloved computer is to read almost every message posted in the forums.

"I participate in the Apple II community trying to maintain my links to others who are also trying to support and use their newly orphaned Apple IIgs," he says.

He enjoys programming the Apple II in Assembler, Pascal and BASIC, and runs a large variety of programs from simple utilities to more complex word processors and music software.

Fox works as a senior reliability engineer for GPU Nuclear Corp. at Three Mile Island Nuclear Generating Station in Pennsylvania. Although he confesses to owning and using an IBM-compatible '486 computer, his heart belongs to his Apple II.

—CC

reported it compiled their code as much as five times faster than competing products. What made Code Warrior even more newsworthy was the way it lets programmers create one program that can be compiled to run on either 680x0 or Macs on PowerPC. You can't always judge the popularity of a program by the amount of discussion it generates in MAUG, since discussion often is drawn off to vendor forums. But in this case, Metrowerks' product was dominating the conversation in the Macintosh Developers Forum partly because its main competitor, Symantec's Think C, has its own section in the Symantec Developers Forum. Still, Ramsey says, "The hot news on stuff like this tends to show up in the Macintosh Developers Forum very quickly."

Aside from "hot news" discussions, another major MAUG activity is problem-solving. Among sysops' chief duties are teaching inexperienced members about basic configuration tricks, such as turning on 32-bit memory, increasing application memory size, creating aliases and standard troubleshooting procedures (zapping the PRAM, rebuilding the desktop, running Disk First Aid). They're also a handy source for fixes to the latest bugs and incompatibilities, such as fixing voice-recognition problems on AV Macs by changing the settings in the sound control panel, and for directions to the Mac vendor forums, where members get support from companies that develop Macintosh hardware and software products. For more challenging problems, sysops and power-user volunteers often pool their expertise.

One recent beneficiary of the MAUG troubleshooting brain trust was information systems executive Malcom Cook, who suspected an Eveready rabbit marching across his Mac network's screens was evidence of a viral infection. A few minutes after Cook posted a query in the Macintosh Systems Forum's Emergency Help! section, Sysop Robert Seaver gave Cook the welcome news that it was not a virus but a harmless joke init, NetBunny, which can be disabled by removing it from the system folder. Mac consultant Timothy Dowdle offered the additional tip that pranksters usually change the init's name to make it harder to remove.

COMPUTING SERVICES

MAUG's Applications Forum solves members' quests for the latest commercial and shareware offerings. Free-lance arranger and producer Richard Huggins of Tyler, Texas, learned that while writing songs for a musical. "I was keeping an aged paperback rhyming dictionary handy on my lap. Not only was it cumbersome to use, it seemed to me that surely someone had figured out how perfect that application would be for software," he says. Huggins posted a message, and within three days had heard from David Goldstein, author of the Mac rhyming program A Zillion Kajillion Rhymes. Huggins called a software supplier and was writing lyrics with the software the next morning. "It was exactly what I was hoping to find —the scope of help online in MAUG is unmatched. Someone already knows the answer needed."

San Jose, California's Sasha Lewis logged onto the Macintosh Multimedia Forum when she discovered that the Quadra 840AV her company, Creative Media Solutions, had just installed wouldn't run Sound Edit Pro, one of her favorite programs. "We rely on it to convert audio clips into suitable music and sound highlights in our multimedia presentations for the high-tech industry," she says. "Forum members, many of whom had experienced the same problem, directed me to a vendor forum for an upgrade." The upgrade failed to work, and Lewis and a fellow member mutually discovered the culprit conflict: an init designed to speed up the Quadra. "I removed the init and everything worked fine."

Unlike the MAUG forums, which are populated almost exclusively by Mac users, the Newton/PIE Forum draws a lot of PC owners as well. That's a constant source of confusion as Windows users encounter Mac-centric habits and file formats, and sysops end up answering basic questions such as "How do I open a StuffIt file on my PC?" several times a week. (Answer: download UNSITI.EXE from Library 6, "Newton/PIE PC.") Forum visitors were recently thrilled to find the long-awaited system update 1.05 available in the Newton libraries, uploaded in both Macintosh and IBM formats.

In addition, the personal digital assistant pioneers are finding the Newton Forum a handy place to exchange discoveries about their new tools. For example, member Carlos Alvarez recently called Ray-O-Vac after he noticed his batteries were too hot to hold when they came out of the charger. Much to his surprise, the tech asked, "Are you by any chance using these in an Apple Newton?" The fix: Take alkaline rechargeables out after the first low-power alert.

But there's more to MAUG than just technical talk and troubleshooting—the Macintosh Community Clubhouse Forum offers a Classifieds section that is truly a great place to pick up Mac computing essentials at low prices from fellow MAUGers. Mark Schaeffer, an Oakland, California, video producer who does graphics and publishing work on his Mac, has saved "at least $500" in purchasing an Apple video board, SyQuest tape drive, MacRecorder and many fonts in the section's wheel-and-deal atmosphere. "It's the classic open market, where you can negotiate price and terms until both the buyer and seller are satisfied," he says.

MAUG's Crackerjack Sysop Staff

Chief MAUG Sysop Neil Shapiro cut quite a deal on his first Apple II computer in 1977. He was a writer for *Popular Mechanics* magazine in New York City and one of just a few writers willing to listen to the Apple public relations flaks. He let them set up their new whiz-bang machine on his desk and sat through the demonstration. Since they didn't really want to break the computer down and cart it back to California, they were only too happy to sell it to Shapiro.

GARRY BURDICK

Mr. MAUG: Shapiro

A member of MicroNet, which would soon become known as CompuServe, Shapiro logged on in search of information on how to run his newfangled computer. For two years, he and a handful of other Apple enthusiasts met Sunday nights in the CB Simulator to discuss their machines and exchange tips. Then in 1980, CompuServe asked Shapiro if he would be interested in being the sysop of an Apple forum. "I didn't know what a sysop was, so I said 'yes'," he quips. Today he is the chief sysop of 12 forums under the collective name of Micronetworked Apple Users Group, or MAUG for short, and leads a staff of 21 sysops.

The various sysops bring years of personal and professional experience to the job. David Ramsey, who was the sole programmer on the MacPaint 2.0 program in his days as an Apple Computer employee, now writes the weekly question and answer column "Ask David Ramsey" in *MacWEEK* magazine. His expertise is appreciated by Mac users in the Mac Systems, Mac Hardware and Mac Developers forums. "I point out known software incompatibilities or solutions to problems," Ramsey says, joking that his greatest joy as a sysop is getting letters thanking him for saving someone's business, marriage or term paper.

Lofty Becker, a professor of criminal and constitutional law at the University of Connecticut law school, believes he and the other sysops set the tone of the forums, making them places where new members feel welcome. Since tone is important when all communication is written, Becker tries to ensure that his messages aren't curt or flip. As sysop of the Mac New Users Forum, he most enjoys helping novices learn. One member left a message of near panic describing how his fiancée had just trashed the diskette containing her master's thesis. Becker requested that the member ship the diskette to him. He recovered the data and sent it back to a very relieved graduate student.

If you're looking for Bill Steinberg, it's much easier to track him down online in any one of the Macintosh forums than it is in real life. An Emmy award-winning video engineer, Steinberg hopscotches around the world directing or assisting with the video production of such diverse television shows as *Live from the Met* and MTV's *Unplugged* series. He faithfully reads every message in nine MAUG forums, often after working 20 hour days in such locations as China, Wales and Hong Kong. One of the first MAUG sysops, Steinberg sees his job in simple terms: to help others. "Very rarely is it a chore. It gives me great satisfaction to help people with their problems."

Sysop Binky Melnick, who usually is found answering questions in the Mac HyperCard/Scripting Forum, has a goal: She never wants to make another MAUG member, especially a new user, feel stupid for asking a question. Melnick draws people out and encourages them to take the risk to ask what they don't know. She takes her job as a sysop seriously, working overtime to stay informed about the industry, tracking down answers to questions and mastering her computer equipment so she can offer solid buying and repair advice.

A former test engineer on Apple's HyperCard team, Melnick also worked on the AppleLink HelpLine and in internal technical support as a database writer and AppleLink software tester before moving to New York City, where she now works for Ex Machina. But Melnick's first love is being a sysop. "I enjoy the feeling of community," she says of MAUG. "We all care about each other, and we want to help when a forum member is in trouble."

Other Macintosh sysops include Bill Cook, Dennis Brothers, Larry Miller, Mike O'Connor, Anne Peck, Roy Roper, David S. Rose, Robert Seaver, Marty Silbernik, Russ Wetmore, Robert Wiggins and David Winograd. Apple II sysops are Peter Chin, Shawn Goodin, Jason Harper and Joe Walters.

—CC

Schaeffer learns the function and market value of hardware and software by lurking, and doesn't worry much about the trust issue, even though the anonymous nature of sales might encourage concern. "I have the feeling I can trust people here—exchanges are made in good faith. MAUG members tend to be honest in their advertising and stand behind what they sell."

The semblance of "community" implied by the forum's name spreads to all concerns of MAUG. Take Mac developer Joe Sewell, for example—his impending marriage might never have happened if not for the help of fellow MAUG member Sandy Kettenhofen. Living in the small town of Melbourne Village, Florida, Sewell had trouble meeting potential dates. Things changed fast when Kettenhofen, a well-known gamer and discussion leader in the Mac Entertainment Forum, gave Sewell the address of a Christian Singles ministry in Van Nuys, California. The first newsletter came in late August, but of the few Florida ads, the only one who was local was too old for him. The next month, there was an ad from someone named Joy in Melbourne. One thing led to another, and Joe announced his and Joy's engagement to fellow MAUG members in December.

Sandy Kettenhofen found "the pot of gold at the end of the rainbow" among MAUG's Macophiles. Bound to a wheelchair since a 1984 car accident (the same year she had seen the original Mac demonstrated at a trade show), she passed the time alone in her remote Northern California home, playing Macintosh games and combing magazines for word of new titles and challenges. "I was a Mac game junkie," she admits.

Then, in 1992, a CompuServe node opened near her home. Kettenhofen discovered the Macintosh Entertainment Forum and many others talking over things about which she knew a great deal. "I started helping them find their way through different games, and suddenly I was back in contact with people again—something I had been missing for many years," she says.

Her ability to describe things in a way that people can understand them was soon noticed by gaming fans and Chief Sysop Neil Shapiro, who offered her a forum staff job. The editors of the electronic magazine *Inside Mac Games* took note as well, offering her authorship of the "Tips & Tricks" column, which in turn led to game reviews for *Mac Home Journal* and *Strategy Plus*. "As a result of that, I got to go to Boston for MacWorld, where I got in the pipeline of getting new game releases, which further extends my ability to help people in the forum and expands my base of human contact," Kettenhofen says.

Such contact included meeting fellow MAUG staffer Dr. Adam Newman at the show, who promptly made her his new daughter's honorary aunt. "Adam uploaded a GIF of Samantha, and I have it sitting on my desktop next to all of my work folders," says Kettenhofen proudly. "MAUG has given me back my life."

Mac Pack: MAUG Directory and Sample Files

Check out the following MAUG forums for Macintosh or Apple discussion, files, help and entertainment. File picks are from MAUG Sysops Neil Shapiro, Robert Wiggins, Bob Seaver and Shawn Goodin.

MAC APPLICATIONS FORUM (GO MACAP)

Learn how to get the most from Macintosh applications for databases, graphics, multimedia spreadsheets and word processors.

Text Recover—Papyrus 1.6 recovers text from damaged files; includes a word processor. Freeware. Library 2, "Word Processing," PPYRUS.SIT (14,208 bytes).

GIF Decoder—GIFConverter 2.3.4 lets you view GIF, TIFF, JPEG, RIFF, RLE, PICT, Paint or Thunderscan documents on any Mac. Shareware. Library 9, "Graphics Tools," GIFCNV.SEA (349,056 bytes).

Post It Notes—Stick It! 1.3 notepad for to-do lists and phone call reminders. Library 15, "Misc. Applications," STKIT1.SIT (206,080 bytes).

MAC COMMUNICATIONS FORUM (GO MACCOMM)

Sections and libraries cover networking, Navigator, terminal programs, communication utilities, hardware, fax machines, local area networks, connecting Macs to PCs, scripts and tools, and Apple Remote Access.

Navigator Face Kit—Contains faces including the "Cool Mac" default face and an alternate, a QuickTime default face and notes on how to use faces with Navigator. Library 2, "CIS Navigator," FACEKT.SIT (593,408 bytes).

Announce 1.2—Network utility for sending instant text and audio messages to other users. Shareware. Library 7, "Networking," ANNOUN.SEA (55,680 bytes).

Mapping Utility—Network mapping utility lets you plot your Appletalk networks. Library 7, ATMAP.CPT (152,832 bytes).

MAC COMMUNITY CLUBHOUSE FORUM (GO MACCLUB)

Check out the message sections and libraries for topics such as rumors related to Apple and its products, classified ads, computing and new products.

Book Preview—Sneak preview of the book *Guide to the Macintosh Underground*, a collection of essays about the Macintosh experience. Library 8, "Magazines/Reviews," MACUND.SEA (207,360 bytes).

***TidBITS* for 1994**—Magazine tells about MacWorld events, new technologies used by Macintosh developers and more. Library 8, TB207.SIT (13,568 bytes).

***Low-End User* Magazine**—December 1993 issue. Library 8, LEU.SEA (60,160 bytes).

MAC DEVELOPERS FORUM (GO MACDEV)

Find information on programming languages such as BASIC, C and Pascal, assembly language, object-oriented programming, tools, debuggers and more.

List Manager—Alternative List Manager 1.2 supports variable width columns and lists larger than 32K. Library 4, "C and Pascal," LLSTMG.SEA (45,696 bytes).

System Update 2.0.1—Part of Apple Computer's System Software, usable on conditions noted by the company. Library 8, "Apple System Files," UP201.SIT (714,368 bytes). For conditions, see file LICENS.TXT (7,808 bytes).

Laser Writer 8.1.1 Installer—Part of Apple Computer's System Software, usable on conditions of the company. Works with System 6 and 7. Library 8, LW811I.SEA (1,018,752 bytes).

MAC ENTERTAINMENT FORUM (GO MACFUN)

Library and section topics include arcade, action and adventure games; board, card and educational games; making sounds and music; and flight simulation.

***Maelstrom 1.4* Installer**—Award-winning shareware arcade game. Library 2, "Arcade/Action Games," MAELST.INS (799,744 bytes).

NinjaBoy 1.3—Color fighting game with digitized sounds. Shareware. Library 2, NINJA.SEA (248,960 bytes).

Sound Converter—Convert sounds between SoundEdit files and System 7 sounds and suitcases, Sound Mover suitcases; extract sounds from HyperCard stacks, applications and more. Library 6, "Sound Utilities," SNDCVT.SIT (134,400 bytes).

MAC FILE FINDER (GO MACFF)

Search this comprehensive database to quickly locate files from Macintosh-related forums. Search by keyword, topic, submission date, forum name, file type, file extension, file name or submitter's User ID. Members using DOSCIM 2.0 or higher, MacCIM 1.6 or higher, or any version of WinCIM can download files directly from this area.

MAC HARDWARE FORUM (GO MACHW)

Sections and libraries include coverage of Classic and Modular Macs, Quadras, PowerBooks and portables, Performas, early Macs, disks and storage, printers, scanners, monitors, video and hot Mac news.

PowerBook Monitor—MyBattery 2.1.1 for PowerBooks shows current battery voltage and estimates of remaining battery time. Shareware. Library 5, "The PowerBook," MYBAT2.SEA (67,200 bytes).

File Reconciliation Utility—Zync 1.0.4 automates the update of files on two volumes or desktop and portable. Freeware. Library 5, ZYNC.SIT (12,416 bytes).

Floppy Installer—QuickFormat! 7.1 is a high-speed diskette initializer. Library 9, "Disks/Storage," QUIK71.CPT (43,264 bytes).

MACINTOSH HYPERCARD/SCRIPTING FORUM (GO SCRIPTING)

Find support for hypertext programs (databases that use words, sound and pictures). Sections and libraries cover HyperCard, the HyperTalk language, XCMDs and advanced technology, SuperCard, other hypertext software, games, education, music and sound, art, utilities, "hyper" magazines and more.

Flash Your I.Q.—Race against a clock to answer questions in various fields from geography to the arts. Library 3, "Education," FLASH.SEA (33,408 bytes).

Pictoid 1.2 XWindoid—Displays a picture in a window. Any closed shape or text can be used as a button. Library 11, "XCMDs & XFCNs," PICTOI.SIT (29,696 bytes).

Listoid 3.4 XWindoid—Displays a reorganizable list in a windoid. Library 11, LISTOI.SIT (27,520 bytes).

MAC MULTIMEDIA FORUM (GO MACMULTI)

Discuss QuickTime, video, sound, art and other topics pertaining to Mac multimedia presentation and applications.

MovieCharts 1.1—Lets you design interactive video presentation screens by combining animated background pictures with QuickTime movies. Library 7, "QuickTime Tools," MOVCHA.SEA (676,608 bytes).

Metamorphis 1.0—Easy-to-use morphing software. Library 7, METAMO.SEA (141,952 bytes).

Sound Mover 1.9—Shareware program for moving and editing sounds. Allows you to play sounds asynchronously, meaning you can interrupt them at any time. Library 9, "Sound Tools," SNDMOV.SEA (115,840 bytes).

MAC NEW USERS/HELP FORUM (GO MACNEW)

Consult the experts on using forums and libraries, virus detection, and advice on systems and shareware.

Compact Pro 1.34—Shareware file-compression and archival utility. Library 1, "Help Files," COMPAC.SEA (124,544 bytes).

StuffIt Expander—Installs StuffIt Expander 3.0.7, a freeware utility that extracts files from the three most popular archive compression formats for the Macintosh. Library 1, STUFEX.SEA (93,952 bytes).

Disinfectant 3.3—Free anti-viral utility effective against all known Mac viruses. Library 6, "Anti-Virus Tools," DISINF.SEA (179,072 bytes).

MAC SYSTEMS FORUM
(GO MACSYS)

Sections and libraries include information on Systems 6 and 7, inits and extensions, control panels, fonts, icons, utilities, system conflicts, file sharing, decorating your desktop, QuickTime, emergency help and more.

Startup Watchdog—Symbionts 2.3 monitors the startup process. Library 3, "Inits/Extensions," SYMBIO.SIT (72,064 bytes).

Notify Reminder System 4.0.3—Control-panel-based reminder system for the Mac. Library 4, "Control Panels," NOTIFY.SIT (81,024 bytes).

File Buddy 2.0.2—General file utility for getting and setting up information, finding files and keeping your disk clear of unused files. Library 7, "Utilities," FILEBU.SIT (152,960 bytes).

MACINTOSH VENDOR FORUMS

Support is offered directly from vendors of Mac-related products in the following forums:

MAC A VENDOR FORUM
(GO MACAVEN)

Vendors offering support are Articulate Systems, CE Software, Connectix, Daystar Digital, DeltaPoint, Ex Machina Inc., Mainstay, MicroMat, Nisus Software, Portfolio Software, Survivor Software and TenpointO/Activision.

MAC B VENDOR FORUM
(GO MACBVEN)

Vendors offering support are Altsys Corp., Berkeley Systems, Component Software, Deneba Software, E-Machines GCC Technologies, Jasik Designs, Microseeds Publishing, Olduvai Corp., Opcode Systems, Radius Inc., Software Ventures, SuperMac Technology, TACTIC Software, T/Maker Inc. and Working Software.

MAC C VENDOR FORUM
(GO MACCVEN)

Vendors offering support are Aladdin Systems, Alysis, Avatar Corp., Baseline Publishing, CoStar, Farallon, Inline Software, Iomega Corp., Mirror Technologies, Softsync Inc., TMS Peripherals and Virtus Corp.

MAC D VENDOR FORUM
(GO MACDVEN)

Vendors offering support are Applied Engineering, Advanced Gravis, Advanced Software, Atticus, Digital Eclipse, Focus Enhancements, Helix Technologies, Insignia Solutions, Leader Technologies, *MacTech* magazine, Micronet, Mercury Systems, Teknosys and *TidBITS* magazine.

NEWTON DEVELOPERS FORUM
(GO NEWTDEV)

Newton technology is the focus. Sections and libraries cover Mac and Windows Toolkits, other languages, Book Maker, NewtonScript, general programming, graphics, communications, marketing and more.

The Tracer—Allows you to toggle the trace function from a movable floater. Library 2, "Mac Toolkit," TRACER.BIN (4,736 bytes).

Soup Inspector—StewPot 1.0b8, a Soup Inspector upgrade that adds a copy/move ability for entire soups. Library 7, "General Programming," STEWPO.SIT (24,704 bytes).

Terminal Emulator—Term-Limit, a limited terminal emulator for the Newton. Library 11, "Communications/Nets," TRMLMT.SIT (25,984 bytes).

NEWTON/PIE USERS FORUM
(GO NEWTON)

Sections and libraries explore connectivity to the Macintosh and IBM PCs and compatibles; Newton technology and interface; news, reviews and shows; communications; Newton software and peripherals; future Newtons; Newton developers; hardware and software reviews; product announcements; Sharp Newton; and more.

Solitaire Package—*Solo 1.2* and SoloLite package, including a surprise ending to the game. Library 8, "Newton Packages," SOLO12.SIT (50,352 bytes).

Sherlock Holmes Mysteries—Anthology of eight of these classic mysteries. Library 8, SHRLK.SIT (231,936 bytes).

RPN Calculator 3.2—Reverse-Polish Notation calculator for the Newton, featuring many scientific and statistical functions. Library 8, RPNCAL.SIT (9,856 bytes).

APPLE NEWS CLIPS
(GO APPLENEWS)

Stay informed of the latest Macintosh news with stories about Apple Computer Inc. and its products. Articles are clipped from news sources including The Associated Press, United Press International and *The Washington Post*. There is a $15-per-hour surcharge for using this service.

APPLE II PROGRAMMERS FORUM
(GO APPROG)

Sections and libraries are designated for Apple developers, Apple software, BASIC, Pascal and C, machine and other languages, IIgs tools, hardware issues, HyperStudio, and sound and music.

Hyper-C—The ProDOSB version of Hyper-C software. Shareware. Library 4, "Pascal and C Tools," HYPERC.BXY (124,800 bytes).

NoiseTracker GS 1.1—Allows users to play Amiga sound files on an Apple IIgs. Library 10, "Sound/Music," NOIS11.BXY (101,120 bytes).

rSounder 2.1—Load and fiddle with rSounds and binary sound files, as well as convert from one type to another. Shareware. Library 10, RSOUND.BXY (348,928 bytes).

APPLE II USERS FORUM
(GO APPUSER)

Sections and libraries contain information on Appleworks, N.A.U.G., utilities, hardware, IIgs DAs/inits, IIgs software, Apple II software, art and graphics, desktop publishing, games and entertainment, telecommunications and more.

Classic Games—*Raster Blaster*, a pinball game, and *Tranquility Base*, a lunar lander game, both from Bill Budge. Library 11, "Games/Entertainment," BUDGE.BXY (26,880 bytes).

***Tetris*-like Play**—*Columns GS*, a *Tetris*-like game for the Apple IIgs. Fee. Library 11, COLUMN.BXY (318,976 bytes).

***Solarian GS* 1.0.1**—Space game loaded with fast animation and digitized sounds. Shareware. Library 11, SLRNGS.BXY (262,528 bytes).

APPLE II VENDOR FORUM
(GO APIIVEN)

Vendors offering support are Applied Engineering, Beagle Bros, InTrec Software, On Three Inc., Seven Hills, Stove Edge Technology, TMS Peripherals and 1st Class Peripherals.

Macintosh News

A monthly MAUG newsletter is now available online. The newsletter features columns from professional Macintosh authors and concerned MAUG members, reviews of uploaded files and a "spotlight" file that, in the opinion of the sysops, should not be missed. In addition, Neil Shapiro reports on the world of Macintosh, including hardware, software and the people who make the Mac what it is. To read the newsletter, type GO MAUGNEWS.

by Jan Smith

MATT WALTON

When Spreadsheets WYG Out

What you see in printing cells and titles isn't always what you get.

Users in the real estate department of a California insurance company kept losing the right parenthesis when printing negative numbers in the comma format of Lotus 1-2-3 for Windows 1.1 and Release 4 on laser printers. After the problem was posted in the Lotus Spreadsheet Forum, systems manager Mike Peters found a workaround: Set the "Print TrueType as Graphics" checkbox in the Windows printer control panel setup options area.

Brian Mitchell, a computing specialist for a large company in Los Angeles, had trouble scaling output from Excel 4.0 to laser printers. On large spreadsheets, he says, "if you try to fit to fewer pages than Excel is capable of handling, Excel will either try to fit your entire report on one completely illegible page, or it will generate a report vastly larger than the original." A Microft Excel Forum sysop suggested scaling the spreadsheet by specifying a reduction/enlargement factor in percentage terms.

Despite advances in software and printer technology, printing spreadsheets still can be a frustrating experience. The problems range from printing sideways to putting noncontiguous ranges on one page. In fact, it's such a common dilemma that Borland devotes special sections of the Quattro Pro Forum (GO QUATTROPRO) to printing problems. Although the Microsoft Excel (GO MSEXCEL) and Lotus Spreadsheet (GO LOTUSA) forums don't have devoted sections, printing questions pop up frequently.

Often the problem is that the output simply doesn't look the way it should—or the way you expect. Sometimes the problem results from the difference in screen fonts (the "what you see" part of WYSIWYG) and printer fonts ("what you get"). The difference between screen resolutions and printer resolutions further complicates the situation.

For example, when Montreal, Quebec, resident Mark Wechsler printed graphs with Excel for the Macintosh, the graph titles or legends didn't print properly. "The last letter and a half would not print," he says. "Thanks to CompuServe, I found two ways to work around this problem." One solution was to add spaces to the end of the legend. The printer misses the last two characters, but since they're blank the legend is intact. "It's definitely not optimal and will skew centering," he notes, "but it gets rid of the problem."

COMPUTING SERVICES

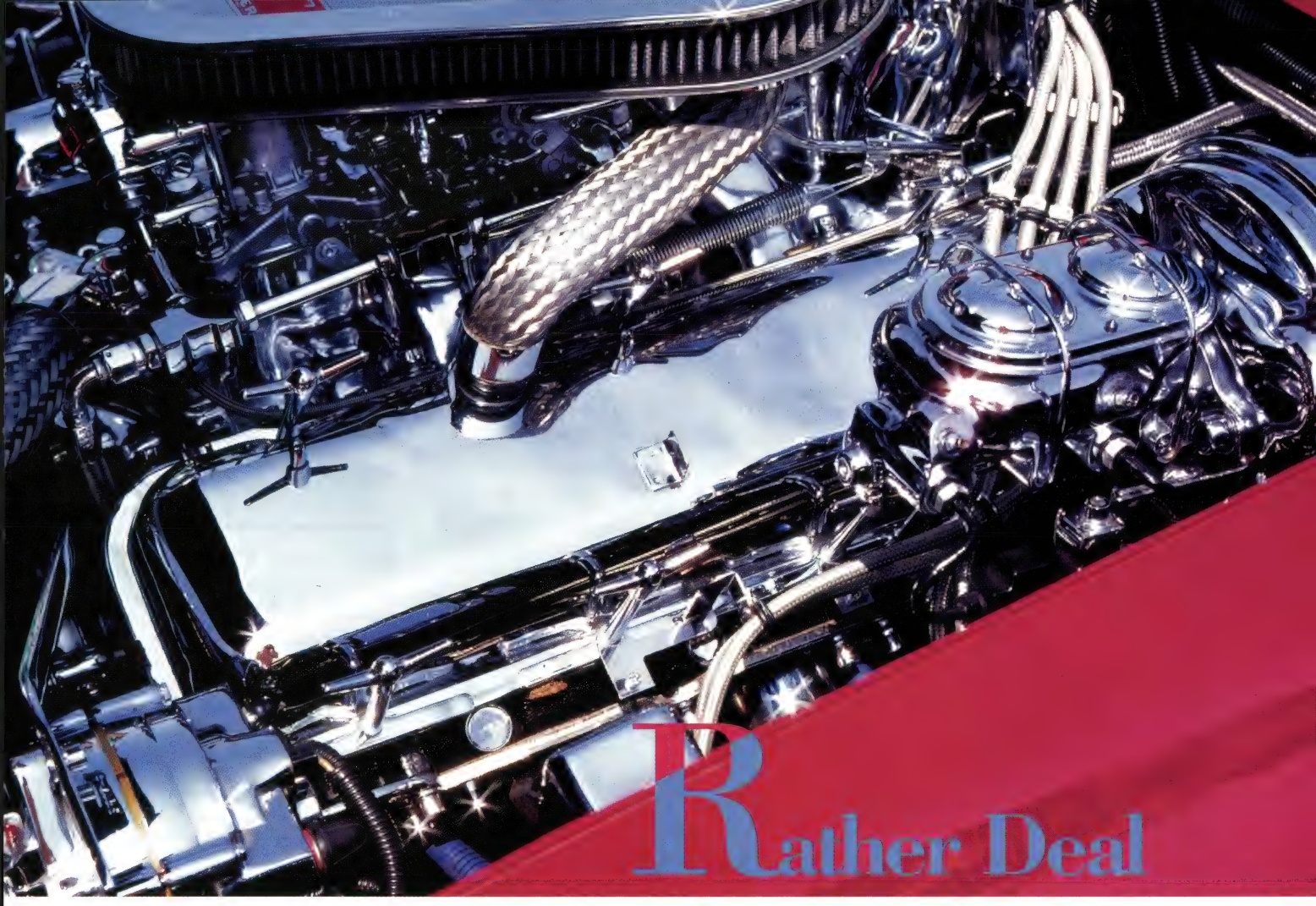
The second solution was contained in an article available from the Microsoft KnowledgeBase (GO MDKB). "The problem occurs when text is truncated by substituting a LaserWriter font for an ImageWriter font," says Wechsler. "To prevent text from being truncated when you print it, use LaserWriter/printer or TrueType fonts."

Many common problems are printer-specific, according to Barry Schnur, a member of Borland's "TeamB" in the Quattro Pro Forum. For example, some dot matrix printers have a Paper Save feature that advances or retracts tractor-fed paper to prevent wasting paper at the beginning of a print job. When printing with Quattro Pro for DOS, he says, "if the Paper Save feature is engaged, the margins go amiss because Quattro Pro doesn't expect the printer to move the paper." The solution is to turn off Paper Save when using the tractor feed.

Another problem Schnur often encounters is slow printing at the highest resolutions on 24-pin dot matrix printers. He suggests reducing the resolution. "Quattro Pro for DOS in graphics mode does a decent job at 180 by 180 dots per inch. Medium resolution may be good enough."

Sometimes the problem is a mismatch between the application and the printer. "Lots of laser printers are almost but not quite Hewlett-Packard-compatible," says Schnur. "If you print in graphics mode, the Quattro Pro font downloads may break, especially in landscape mode." If that happens, Schnur suggests using the HP DeskJet Plus driver, which forces the printer to use bitmaps instead of downloaded fonts.

New printers often cause problems because drivers tend to lag several months behind new printer introductions. "The client gets his new, fully loaded, super-trick printer, and he can't print until Lotus, Borland, WordPerfect, Microsoft or whoever gets a driver for its software," says Bill Nolan, a consultant who also teaches business application classes at a college in Arizona. Since most new printers now are



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GO OLI for more information.

shipped with Windows drivers, he adds, "this is a good argument for Windows software."

But Windows can cause its own set of problems because printing in Windows requires lots of system resources. Quattro Pro for Windows user Joseph W. McLaughlin of Las Vegas, Nevada, didn't have enough memory to print a "fairly simple spreadsheet with a lot of line drawing" using his new Hewlett-Packard LaserJet IIP Plus. "It came with only a standard 512K memory capacity and gave me problems," he says. After upgrading to 4MB, everything worked fine. "From what I have learned, you can never have too much memory. It is frustrating to have 'state of the art' equipment as I do and not be able to print because of a lack of memory capacity."

COMPUTING SERVICES

Forum technical support experts Schnur and Dwight Morse, who handles technical support for Lotus 1-2-3, agree. "If you want to add graphics and shading, 512K is not enough," say Morse. "Windows printing requires resources," says Schnur. "Lack of memory can cause things not to work. For example, inserted graphs may print without titles and legends."

If you're not able to add memory to your printer—the best solution—there are workarounds. For example, you can use the 1-2-3 for Windows classic menu and print in draft mode. "You just get what's in the cells. It's faster because it's using a generic printer driver, not its own driver," says Morse.

In addition, Quattro Pro for Windows and HP LaserJet users can click the Page Protection box in the Windows control panel. "It reserves enough memory for the image of the page," says Schnur. "It's OK if everything is letter size."

After years of watching his mother enter quiz scores in her junior college grade book by hand, Simon Buckner of Jefferson City, Missouri, persuaded her to automate the process using Quattro Pro and an Epson dot matrix printer. Quattro Pro for DOS allowed her to put a student's name on a line and various quiz and lab scores in columns. "She could print her entire spreadsheet 'banner' style across several pages, cut each row and give the students every score she had, so the individuals could check their totals with hers," Buckner says. That worked fine until they upgraded to Windows and lost the ability to run a column across several contiguous pages. Now, Buckner says, "she's going back to Quattro Pro for DOS."

Sometimes there is no solution. John P. Graham, a Linthicum Heights, Maryland, resident who uses Quattro Pro for Windows, had difficulty printing gridlines around cells on a Hewlett-Packard LaserJet 4. "When I viewed the document with the Print Preview command, everything looked as it should," he says. "However, when I printed the cells, sometimes I would get the gridlines, but more often I would not."

He posted a message in the Quattro Pro Forum, then sent a copy of the spreadsheet to Borland at their request. Borland confirmed that the problem is with Quattro Pro for Windows and suggested that Graham select 300 dpi printing if he could live without the higher resolution graphics.

Many who struggle with spreadsheet printing problems turn to the forums for help, and they receive help not only from the software companies' technical support forums but also from fellow members. "On at least two occasions, members had written their own drivers when they couldn't find one, and they were kind enough to give me a copy," Nolan says.

Excel user Wechsler often uses the forums as well. "It's nice to see that kind of cyberwelfare where onliners help one another out."

Jan Smith is a free-lance writer based in Jamaica Plains, Massachusetts. Her CompuServe User ID number is 76000,23.

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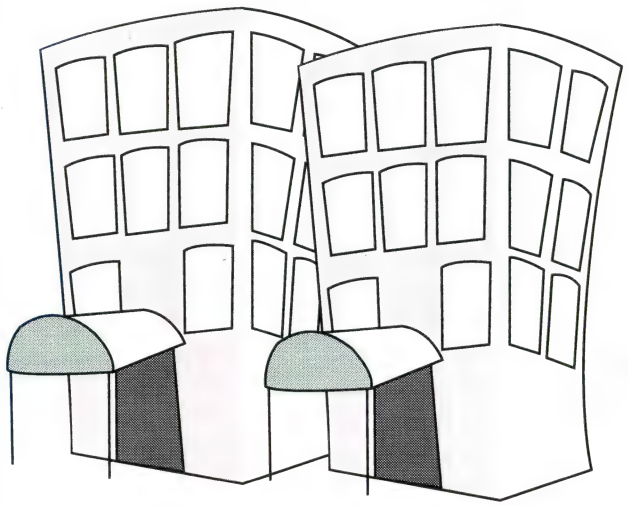

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Adding It Up: Spreadsheet-Related Uploads

Since the invention of VisiCalc in the 1980s, spreadsheets have become a nearly indispensable business tool. Besides basic calculating, spreadsheets have been used as databases, presentation programs, tax preparation packages, even memo writers—truly one of the most versatile software tools available. You'll find not only technical support but also a variety of tools, templates and newsletters on CompuServe to help you get the most out of your spreadsheet.

For technical support, all of the popular spreadsheets are supported online. Troll the IBM Applications (GO IBMAPP) and Mac Applications (GO MACAP) forums for shareware utilities, add-ons, up-to-date printer drivers and templates for calculating everything from mortgage rates to tax returns.

Investors can search the financial forums (GO FINFORUM) or the National Association of Investors Corp. Investor Education Forum (GO NAIC) for templates to help calculate the value of portfolios, compute loan amortization schedules and even prepare business plans. The ZiffNet Software Library (GO SOFTLIB) contains Designer Template collections to help spreadsheet users of all skill levels produce professional-looking forms and reports, ranging from personnel forms to household inventory records.

If you change programs or printers, you may find your files don't print as well as they used to. There are several places to search for drivers: The Lotus Spreadsheet Forum (GO LOTUSA) includes updated drivers for popular printers for all versions of the programs. Or check the printer manufacturer's forum, for example the Hewlett-Packard Peripherals Forum (GO HPPER), for the latest drivers. Following is a sample of spreadsheet files available online:

BORLAND QUATTRO PRO FORUM (GO QUATTROPRO)

ASCII Converter—Converts space-delimited ASCII files into Quattro Pro's WQ1 format. Reads the text file and determines the right type of data entry (label or value) to get around the limitation of having fewer than 255 characters on a line of an imported file. Library 3, "QP/DOS-General," ATOQP.ZIP (33,172 bytes).

Utility Disk—Contains several Quattro Pro worksheets with macros for performing such common tasks as printing multiple spreadsheets or graphs. Library 4, "QP/DOS-Macros," UTLDSK.ZIP (153,576 bytes).

Useful Macros—Tab Label allows you to use a block of labels in a notebook to name notebook tabs. Insert allows you to enter data into a selected block of a notebook without using arrow keys to move the cell selector. Library 9, "QP/Win-Macros," TABENT.ZIP (42,040 bytes).

CLARIS MACINTOSH FORUM (GO MACCLARIS)

Resolve Technical Notes—On Apple events and externals. Library 8, "Resolve Library," RESNTS.SEA (37,248 bytes).

COMPUTER ASSOCIATES PROFESSIONAL SOLUTIONS FORUM (GO CAIPRO)

SuperCalc for Windows Demo—Self running demo of SuperCalc for Windows. Library 7, "SuperCalc/Compete," SCWIN.EXE (1,238,490 bytes).

LOTUS SPREADSHEET FORUM (GO LOTUSA)

Spreadsheet Consultant—Monthly editions include templates, macros, tips and tricks. The June 1993 edition, for example, explains the new messaging commands in Windows spreadsheet and offers encryption/decryption macros, among other things. Library 2, "1-2-3 Release 3.X," SC9306.EXE (24,738 bytes).

Social Security Retirement—Calculates a break-even point for two retirement dates and payment amounts from Social Security. Includes current expected mortality tables. Library 2, SOCSEC.ZIP (5,779 bytes).

Blackbox Macro Programming—A "plug and play" subroutine library that lets you build complex macro programs by snapping together the subroutines. Sort of like playing with Lincoln Logs. Library 2, BBX.ZIP (59,264 bytes).

WYSIWYG Tips—Describes 1-2-3's WYSIWYG add-on and some previously undocumented features it provides. Library 4, "1-2-3 for OS/2," WYSWYG.ZIP (17,881 bytes).

Technical Document—Helps Improv users optimize Windows to work with Improv for Windows. Library 12, "Improv for Windows," OPTIMI.TXT (1,921 bytes).

MICROSOFT EXCEL FORUM (GO MSEXCEL)

Basic Stock Quotes—Macro converts data from a basic stock quotes capture file produced by CompuServe Information Manager and loads it onto a worksheet. It allows users to make charts or perform any worksheet analysis. Library 2, "Excel for the Mac," BSTOCK.MCR (9,344 bytes).

Retirement Projections—Projection program to plan for retirement. Allows side-by-side comparisons using different assumptions. Gives figures in current and future dollars. Also allows you to establish goals and tells you what you need to do to meet them. Library 3, "Excel for the PC," RETIRE.ZIP (20,909 bytes).

Loan Payment Calculator—Sample worksheet that calculates interest savings on loan prepayment. Demonstrates interest calculations when irregular payments are made. Find out how much you'll save by prepaying principle. Library 3, PREPAY.ZIP (10,803 bytes).

Compleat Voice Reader for Excel—Reads negative number dates as dates, currency, percent, fractions, cell position and embedded sound notes. Read functions are available (with registration) for use in macros. Library 3, TLKWS2.ZIP (376,246 bytes).

MICROSOFT KNOWLEDGEBASE (GO MDKB)

A searchable database of articles containing tips, technical help and documentation errors on Microsoft products.

MICROSOFT SOFTWARE LIBRARY (GO MSL)

Library of printer drivers, demos, patches, application notes, sample code and utilities for Microsoft programs.

PC VENDOR F FORUM (GO PCVENF)

TRIUS Technical Reports—Based on questions from users of TRIUS programs, including the As Easy As spreadsheet program. Library 16, "TRIUS," TECHRA.TXT (5,580 bytes) and TECHRB.TXT (5,317 bytes).

Lease or Buy Decision—Template attempts to account for most factors that would enter a purchase/lease calculation. Library 16, LEASE.ZIP (1,400 bytes).

by Cary Roberts

The Direct Mail Approach

Combining an effective mailer with soliciting phone calls can pump up a business's client base.

Home-based and small-business people rarely have money to spare on large-scale advertising and marketing campaigns. However, many CompuServe members use a hybrid form of direct-mail advertising as a cost-effective method of contacting potential customers. Instead of traditional mailings that aim for on-the-spot purchases, they send pieces to introduce their product or service and pave the way for additional contact.

Direct-mail circulars encourage recipients to make purchases with no follow-up from the advertiser other than repeated mailings, says Laura Clampitt Douglas, leader of a recent Working From Home Forum (GO WORK) study group on direct mail and co-author of *Getting Business to Come to You* (Jeremy P. Tarcher, 1991). They are often useless for small, service-based businesses because many customers rarely make spur-of-the-moment purchases, she adds. Such businesses must first establish a relationship with potential clients. Douglas recommends a combination of direct-mail marketing and solicitation in which the mailing provides name recognition and credibility, while follow-up calls supply in-depth information and personal contact to develop trust. The direct-mail piece is "merely the setup, the excuse for the follow-up," she asserts.

Mitchell Tobol, president of a New York-based marketing consulting firm and adjunct marketing professor at Long Island University, agrees. He frequently combines direct mailings and follow-up telephone calls. "Telemarketing does for direct mail what gasoline does for a car," he notes. His direct-mail pieces are not for soliciting leads or making sales but for raising recipients' awareness of his company in preparation for future contact. For example, he mails bags of microwave popcorn with the message "Want to cook up some new business?" When he places the subsequent telephone call, the person already knows him as "the guy who sent the popcorn."

Regardless of the desired outcome—establishing a rapport with clients or making sales—putting together a direct-mail campaign can be a daunting chore. James E. Johnson, a Texas-based entrepreneur and PR and Marketing Forum (GO PRSIG) member who teaches courses for the Direct Marketing Association, says there are five key factors in a successful direct-mail campaign: the list or targeted market, offer, copy, package and timing.

The list, representing the targeted recipients, is the most important variable because the message must be sent to people with an interest, need or desire for the product or service. "It is almost always better to send a poor mailing package to the right audience than it is to send the most creative mailing package to the wrong audience," Johnson says. (For tips on acquiring mailing lists, see "Buying or Building Mailing Lists," p. 31.)

LIN WILSON

A mailer should choose the audience based on desired demographic characteristics, such as occupation, income level and location. However, the mailer must also *understand* the targeted audience. "You must know their attitudes and perceptions to successfully present your service," says Tobol. Armed with as much knowledge as possible, mailers can more accurately gauge the direction their package should take and make such decisions as whether to send letters or postcards, offer a gift or a discounted service, mail first-class or bulk rate, and whether to send a personalized or nonpersonalized message. While researching the audience, "you

Cary Roberts is an assistant editor of CompuServe Magazine. *Her CompuServe User ID number is 70004,2650.*

PERSONAL ENTERPRISE

CM's Personal Enterprise Credo: Your livelihood is in the cards and circuit boards of a machine, whether it's running a home business, entrepreneuring or financial planning. If time is money, time online can build a treasury of ideas on saving and making both.

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Targeted Client Prospecting
▼
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▼
Ergonomically Correct Offices, p. 35

Buying or Building Mailing Lists

The essential ingredient in all successful direct-mail campaigns is a mailing list that accurately reflects the target audience. In many cases, a professional list broker can provide it. Sometimes, however, the list must be developed from scratch.

Glenn Weissman, vice president of New Resi Data, a New Jersey list brokerage house, describes a list broker as "similar to a real estate or travel agent. They're there to protect clients and act as a go-between when something goes wrong." A good broker will help clients properly target their market and find the right list.

A common scenario is for a broker to locate the proper list and purchase it from the owner at a discounted price. The broker then sells it to the customer for the full price. Often, brokers sort the list for the customer based on specific criteria such as occupation or income level.

Mitchell Tobol, president of The Tobol Group, a marketing/advertising company and registered list brokerage firm in New York, says most lists are rented for one-time use, but the names of recipients who respond to a direct-mail piece belong to the mailer and can be used again and again. The cost of renting lists varies according to their content, but it often is quoted per name or number of names. For example, Weissman's firm rents a single name for as little as 15 cents.

When choosing a broker, begin by looking in Biz*File (GO BIZFILE) or in the Yellow Pages under "Mailing Lists." Weissman recommends calling several firms and asking how long they've been in business; the minimum number of names that must be purchased; if they're members of the Direct Marketing Association; how often their lists are updated; and if they have a guarantee of deliverability, ensuring that the names and addresses on the list are still valid. Tobol recommends also asking if they have computer databases on the premises. "If they do, then they're of the size that they're selling their own product," he says.

There are several categories of mailing lists. One of the most effective is a list of an organization's customers, known as a house list, according to James E. Johnson, a Texas-based entrepreneur who teaches a mailing list course for the Direct Marketing Association. Other types include compiled lists assembled from public or published sources, such as an association directory; subscription lists from publications; contributor lists from charities; lists of individuals who've made purchases through the mail; and business and consumer lists, such as new businesses or movers in a specific ZIP code area. Compiled lists, however, often have fewer deliverable names or less accurate demographics than other types of lists, which are monitored and updated, says Tobol.

Some businesses must build lists from scratch. When Maryland-based author Herman Holtz wanted to sell reports through the mail on how to do business with the U.S. government, he looked at companies' newspaper ads to identify potential customers. He then worked with the Small Business Administration and got a list of Navy contractors. He also traded with other list owners and found names in association directories. "Little by little, I built up many thousands of names," Holtz recalls.

Laura Lee Lemmon, owner of an Ohio-based, one-woman advertising agency for the horse industry, couldn't find a list for her mailings. "I wanted to find all horse-related businesses and horse owners in Cincinnati and Dayton. Through a national list seller, the closest list I could find was of farm owners," she says. So Lemmon developed her own list of stallion owners who advertised in local horse publications. "I wanted people who were already familiar with and used advertising," she adds.

Several CompuServe resources also can help. Lemmon participated in a recent Working From Home Forum (GO WORK) direct-mail study group. Weissman recommends the Advertising and Marketing section of the PR and Marketing Forum (GO PRSIG) and the Marketing Support Services section of *Entrepreneur's* Small-Business Forum (GO USEN). Several brokers participate in the sections' direct-mail discussions. Biz*File and Phone*File (GO PHONEFILE) are good resources for finding demographic and mailing information.

—CR

DAN CHURCHILL

A length ahead in the direct-mail race: Lemmon

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Postal Promotion: Direct-Mail Uploads

Searching forums using the keywords DIRECT MAIL or MAILING LIST yields numerous library files containing valuable information on direct mail. Here are a few to get you started:

COMPUTER CONSULTANTS' FORUM (GO CONSULT)

Direct Experience—Message thread on experiences using direct mail, response rates and tips for increased effectiveness. Library 3, "Getting Started," DIMAIL.THD (16,023 bytes).

Review and Criticism—Constructive criticisms of a forum member's direct-marketing letter. Library 3, DIRECT.THD (10,847 bytes).

ENTREPRENEUR'S SMALL-BUSINESS FORUM (GO USEN)

Guidance Granted—Free guide book on computerized direct mail. Library 4, "Marketing Workshop," MAIL.ASC (606 bytes).

Mailing List Manager—St. Dragon Enterprise Mailing List Management Software for DOS. Library 10, "Business Software," MAILM.ZIP (346,099 bytes).

LEGAL FORUM (GO LAWSIG)

Client List Manager—Demo of Legal Link Software, a program that manages your clients and thus helps direct your marketing. Library 5, "Software/Automation," LEGALL.ZIP (167,814 bytes).

Law Firm P.R.—How a law firm can use direct mail to market itself. Includes suggestions on format and style, ethics, cost projections and personal examples. Library 11, "Demos, Vendors," LAWFIR.DM (9,155 bytes).

PUBLIC RELATIONS & MARKETING FORUM (GO PRSIG)

Forum Feedback—Advice a forum member received on a direct-mail letter. Library 1, "On Your Own," DMHLP.STR (9,248 bytes).

This Is a Test—Description of a program that calculates the necessary test quantity for a direct-mail test and the degree of confidence in such a test. Library 5, "My Tech PR," DMCALC.TXT (4,496 bytes).

What Makes It Work?—Discussion of what makes a direct-mail package effective, with emphasis on the letter. Library 13, "Advertising/D-M," LTRS.STR (24,439 bytes).

Open Sesame—Article from *The Marketing Communications Report* on how to get prospects to read direct mail. Library 13, DIRECT (6,063 bytes).

Bulk vs. First-class Mailing—Message thread on the merits of sending direct mail as bulk rate vs. first-class. Library 13, BLKFST.STR (20,268 bytes).

Seasons for Success—Discussion of best day and month to send out a direct-mail promotion. Library 13, DMDATE.STR (6,372 bytes).

Direct-mail Cost—Discussion of expenses involved in a direct-mail campaign, intended as a guide for those considering a direct-mail venture. Library 13, DMCOST.TXT (10,262 bytes).

WORKING FROM HOME FORUM (GO WORK)

Resources—Direct-mail resources for home businesses. Library 2, "Business Info," RES1.TXT (2,494 bytes).

Desktop Publishing—Message thread examining mailing lists and other advertising options. Library 5, "Specific Businesses," DTPADS.THD (8,655 bytes).

Study Group—Discussion of direct-mail chapter from the book *Getting Business to Come to You.* Library 7, "Getting Business," GB10D.TXT (20,391 bytes).

Mailing List—Mailing list of more than 1,000 software customers and PC users, including hobbyists, small businesses, computer clubs and more. Library 7, SSP930.EXE (112,347 bytes).

Creative Uses—Text of 1991 conference on using mailing lists and related services to promote business. Library 7, ZIP-4.TXT (27,552 bytes).

Barcode for Bulk Mailing—Program that prints the Postnet barcode, a discount-getter for bulk mailers. Includes other money-saving postage tips. Library 14, "Office Hardware and Software," PSTNET.EXE (37,558 bytes).

might find out there are problems the competition is not addressing, thereby giving you an opportunity to market yourself," Tobol adds. Such insight would help shape a mailing's look and content and likely increase its draw.

Judith Cronin, a New Jersey-based small-business marketing consultant, rents several mailing lists and combs through them searching for businesses that meet her specific criteria. "I've found that some groups respond better than others, and more important, some categories turn into clients much more quickly than others," says Cronin, who is a member of the Working From Home Forum. She attributes her high average response rate of 2 percent to 5 percent (an acceptable response rate can be as low as a half percent) to her precise targeting.

She has experimented with three types of mailing packages—a letter in an envelope, a double postcard and a tri-folded self-mailer—and found that letters pulled the best response. For the past year, Cronin has sent letters to about 100 businesses once or twice a month with business reply cards, asking recipients to respond for more information or a free consultation through first-class mail. The letters are nonpersonalized with the general salutation "Dear Fellow Business Owner," explain her services and offer *Affordable Marketing,* a four-page marketing guide that includes 25 low-cost tips for small businesses. She follows up with respondents by phone to try to close the sale.

PERSONAL ENTERPRISE

In her mailings, Cronin includes postage-paid business reply cards and uses a postal permit because she says it makes a business look more professional and substantial. Although a stamp represents a minimal cost to potential clients, she argues it is an inconvenience: "If you have to go through the aggravation of finding a stamp, you may not put the reply in the mail."

Cronin tries to mail her pieces during the second week of the month. "One source said that the first week of the month people are more concerned about paying the last month's bills than in purchasing new services," she says. She also mails on Mondays or Tuesdays for a mid-week delivery, reasoning that on Monday "people are still feeling sorry for themselves" and on Friday "they're too busy looking forward to the weekend."

Laura Lee Lemmon, owner of The Composition Company, an Ohio-based advertising agency for the horse industry, found that postcards pull better than letters for her target audience of stallion owners who advertise in local horse publications. A postcard is more economical for her to produce and easier for the recipients to read. "The message is right there as they walk back from the mailbox, and they don't have to open a package from someone they might not have heard of before," says Lemmon, who is also a member of the Working From Home Forum.

Her last postcard mailing was on green card stock paper, displaying a picture of a young girl and a horse. It cost about $35 to produce at a local quick print shop. It encouraged recipients to promote their new foal crop with a brochure and offered a special of 500 brochures for as little as $50. Out of the 70 nonpersonalized cards sent, Lemmon received a 10 percent query and about a 1 percent sales response. When people reply, she sends them a follow-up package that includes several business cards, a brochure and a letter further defining her services, and a coupon incentive. Lemmon also sends a biannual, two-page newsletter to the same list of 70 names. "The newsletter makes me appear more like an expert. It lets them

know that I do research and pay attention to industry trends," she says.

The experts recommend constant testing of the different variables to see what works and what doesn't. Marketing consultant Tobol reminds that all marketing "is not written in stone. It's a flexible, adaptable flow." Herman Holtz, a Maryland-based author of numerous business-related titles including *Starting and Building Your Catalog Business* (John Wiley & Sons, Inc., 1990), used direct mail to sell reports such as one on how to do business with the U.S. government. His first objective was to find out if anyone wanted the product. "With a very few names, I can find out right away if there's any interest in what I'm selling," he says, warning mailers to test the most significant variables first. "Unfortunately, there are people who start testing the color of the paper before they know if there is a demand for their product and whether they're including a viable offer." With small-scale mailings, it is difficult to perform any meaningful statistical tests, but Holtz says, "You can monitor carefully, keep records and watch what's working."

Many small-business owners give up too quickly when implementing a direct-mail campaign for the first time. According to Tobol, "Frequently, when a small or medium-sized business tries direct mail and it doesn't work, they assume direct mail doesn't work period. It could be the list, the piece, the strategy, what they said." They may assume that a letter with a brochure and business reply is the only method. "You can't assume anything in direct mail. There are a lot of rules, and they all can be broken. Everyone gets #10 envelopes all day. Do something different."

Dave Millman, owner of a California-based firm providing competitive and marketing research services to high-tech companies, stuck with direct mail after an initial unsuccessful campaign. During his career as an adventure travel salesman, he did two mailings advertising travel packages to the same list of about 2,000 names. The first was a 9-by-12 envelope with six pieces in it, including a four-color brochure and a tour itinerary—a classic direct-mail package. "We sold zero from it. It was easy to track the response because there was none," he says. Six months later, he sent an eight-panel, black-and-white self-mailer to the same audience. "That brought us back from the brink of disaster and sold a bunch of tours," Millman recalls.

No one formula works for all direct-mail efforts. As author Douglas says, "There jes' ain't no sech aminal. The more care one gives to planning up front and the more careful one is about testing and tracking, the more likely one will be to make a direct-mail marketing program successful."

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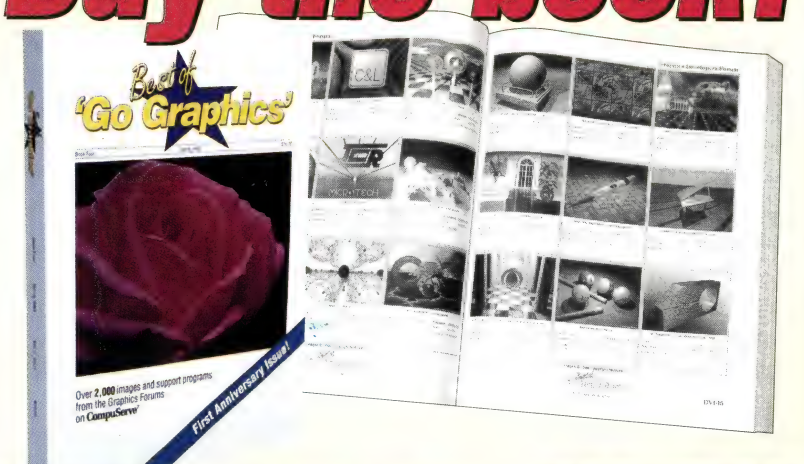

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Announcing the CompuServe User's Guide for Windows.

Moms may be great for a bit of advice on life and love. But if you're looking for where to go, what to do, and how to do it on CompuServe, you need the new CompuServe User's Guide for Windows.

In it, you'll find information, advice, and explanations on everything from how to book a flight to where to play a game. You'll discover shortcuts to your favorite places and easy-to-read information that will help you get the most out of them. Plus, if you act now, we'll offset the $10 purchase price by giving you a $10 online usage credit.

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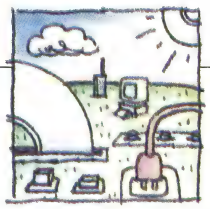

CONSUMER ELECTRONICS SUPPLEMENT

This special insert is designed to help consumer electronic enthusiasts get the most out of CompuServe's forums and services.

LIGHTSCAPES/THE STOCK MARKET

Understanding the Present and Future of Compact Disc-Interactive

CD-i: Where PC Meets TV

by Paul A. Gilster

Multimedia, long a computer industry buzzword, is becoming a reality on today's desktop. But the benefits of interactive voice and video aren't limited to CD-ROM drives installed on computers. In a bewildering variety of formats, new multimedia products for the home and office, connecting to television sets rather than PCs, are appearing on the market. Leading them is an interactive device with an impressive pedigree and an expanding base in business and entertainment: Compact Disc-Interactive.

CD-i is a system for playing digital data stored on a compact disc. Developed jointly by N.V. Philips of the Netherlands and Japan's Sony Corp., the format was explicitly designed as a product for the mass market. CD-i players, of which the $499 Philips CD-i 220 is the prime

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Laserdiscs: Why the Movie Platters Matter

CE Vendor Forum Open

To keep up with the consumer electronics industry, visit the new Consumer Electronics Vendor Forum (GO CEVENDOR), part of CompuServe's extended services.

Similar to other vendor forums, it features customer support from leading manufacturers, including Pioneer Electronics, Harman Video, Videonics, NHT and Fosgate Audionics. New vendors will continue to be added.

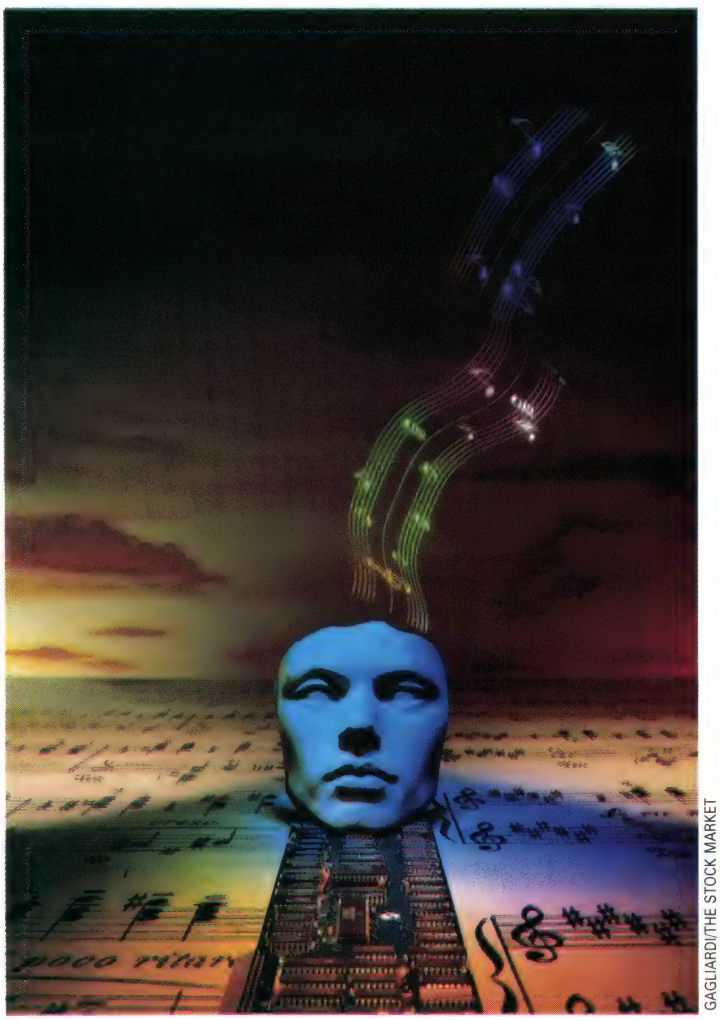
It is also the home base for the Electronics Industry Association's electronic information service. EIA Online includes support areas for EIA members, journalists and the general public.

ILLUSTRATIONS BY DANIEL BAXTER

example, are being marketed more like VCRs than computer peripherals. Click on an encyclopedia entry to hear and see a rocket lift-off. Use a pointer to explore an educational landscape. Or, by using an adapter, watch full-length feature films with audio channeled through your own stereo system.

Best of all, CD-i is easy to install. "Five minutes is all it takes to hook the player into your television and stereo," says Multimedia Forum member Lucy Lediaev, manager of developer services at Philips Interactive Media in Los Angeles. "CD-i is a great family machine. Anyone from 3 to 90 can use it easily." Lediaev points out that major companies worldwide have embraced the CD-i format, an advantage not enjoyed by such competing systems as 3DO and Sega CD. Philips hopes that will keep CD-i titles on the upswing.

From the home entertainment standpoint, the list is already impressive. Audio and video overlap with startling ease in the Philips catalog; musical video releases range from Andrew Lloyd Webber's *Cats* to classic Eric Clapton. Games take on new life: The popular computer game *Tetris*, for example, becomes a three-dimensional product enhanced with video and music. From an educational perspective, *Mozart: A Musical Biography* follows the composer's life through a series of his compositions, and *A Revolution in Color* displays Russian paintings in an interactive museum tour backed by the music of Tchaikovsky and Rachmaninoff.



GAGLIARDI/THE STOCK MARKET

At present, CD-i and CD-ROM are incompatible; you can't plug a CD-i disc into your computer's CD-ROM drive and play it. But efforts are under way to change that through hardware add-ons; a Macintosh card to handle the necessary data conversion is already in the works. Any television set or computer monitor, as long as it is RGB- or NTSC-compatible in the United States (or PAL-compatible in Europe), can display CD-i titles.

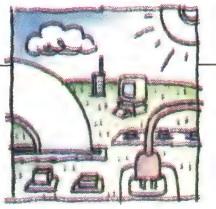
CD-i actually was designed for television. CompuServe member John VanHoozer, who creates digital video interface tools for OptImage in Los Angeles, notes that the 256-color video card in most 80386 and higher computers is not optimum for showing full-motion video.

Formed to develop authoring tools for the developers of CD-i titles, OptImage produces a package called MediaMogul, which allows designers to combine images, drawings, video and music into integrated multimedia programs. "How many computers are there in the United States? 10 million? 40 million? Now look at how many homes have televisions," VanHoozer says. "In the future, TVs, telephones and computers may meld into one appliance, but I'll bet the interface will start out based on the TV first. It's familiar and friendly to people."

Full-motion video is a new arrival on CD-i; Philips has only recently begun to sell a Digital Video Cartridge for its CD-i 220 player, allowing movies and interactive digital video titles to be played. The option attracted London-based Peter Taffs, who bought his CD-i system to watch digitalized movies on a wide-screen television. Taffs likes the machine, although he reports reservations about digital video. As discussed frequently in the Multimedia Forum (GO MULTIMEDIA), which includes Section and Library 17 CD-i issues, digitizing an image can cause what had been smooth variations in colors to appear as a series of bands, a gradation or "step" effect caused by the technology.

But judging from discussions in the Multimedia Forum, the strongest growth for the fledgling format is in business. Lediaev and other Philips representatives regularly answer questions in the CD-i section there, and it takes only a few visits to realize that developers of specialized applications are working hard to bring out new products. Many of these developers are concentrating on creating customized CD-i programs for people who need to make presentations. Using sophisticated authoring tools, they can produce a business package that takes advantage of the CD-i disc's immense storage capability (more than 650MB of sight and sound) and its portability.

In Kansas City, Missouri, Spinnaker Communications is an active CD-i developer. According to CompuServe member Mark Logan, the company's director of interactive media services, Spinnaker is just beginning to apply its background in video and film to the format. A recent project involved a training program for the Federal Emergency Management Agency. Using an interactive role-playing accident scenario, users can refresh their knowledge of procedures for responding to radiological accidents. Another Spinnaker project: a sales and marketing disk for agents of a major



telephone company, using animation, graphics and music in portable players.

For Logan, CD-i's advantages outweigh the confusion about the various formats of interactive media. "There is a bit of apprehension out there because of the question of format; people aren't sure which horse to ride," says Logan. "But we believe we have the technology today in CD-i to supply interactivity for 99 percent of the business applications we see. CD-i is affordable and user friendly."

Developers are coming out of the woodwork as CD-i takes hold. In Chicago, CompuServe member Scott Schenker is a producer for a corporate communications firm that is making the jump into CD-i. For this developer, full-motion video is a major plus. Unlike traditional video, which proceeds relentlessly from beginning to end, CD-i allows the presenter to move into more depth on particular subjects, or to jump from topic to topic. A customized presentation can supplement its video features with other audio and graphical tools. "We have to stop thinking in linear terms to get the most out of CD-i," says Schenker. "Now we can trust an audience to know what they want, targeting the presentation, going into depth, explaining and justifying a position."

The range of possibilities for business is wide, as CompuServe member Harry Hallman can attest. The president of Corporate Media Communications in Tucker, Georgia, Hallman is producing three custom applications. An in-store promotional tool offers a running display of products to customers. A client with numerous presentations to make will receive a CD-i disc combining still photographs, video and music in a form less costly than the traditional slide and video tape format. And a disc designed for portable CD-i players in the field will help sales representatives determine what their clients need in a consultative selling process using a point-and-click menu.

"The acceptance of CD-i or any new technology will have to be based on the concept that it lowers cost or increases sales," says Hallman. "CD-i can do both, but it takes a lot of consumer education to convince the business community. There is a fear of buying into a technology that will be outdated in a year or so."

Countering that fear will require an expanding base of consumer products and continued interest from developers. Because Philips does not release sales figures for the product, its current popularity is hard to gauge. But CD-i partisans, eyeing new titles and the arrival of full-motion video with interest, are anxiously watching to see how well their format plays in the marketplace.

Paul A. Gilster is a computer columnist and technology writer based in Raleigh, North Carolina. He specializes in the application of new technologies to business.

Disc Lowdown: Forum Files on CD-i

Here's a list of places to look for CD-i information, along with a few handy files:

CD-ROM FORUM
(GO CDROM)

CD-ROM vs. CD-i—A file of basic information on the various formats involved in today's multimedia, including CD-i. Library 1, "General," CDROMF.ZIP (43,240 bytes).

CONSUMER ELECTRONICS FORUM
(GO CEFORUM)

Here you'll find a variety of section and library areas on multimedia subjects, including Section and Library 2, "Video Hardware"; Section and Library 4, "Video Software"; and Section and Library 10, "Misc. Electronics." Also look for files like these:

Photo CD Information—This is the text of a Philips press release announcing the extensions added to the format to allow sound and graphics to be recorded on Photo CD discs. Photo CD pictures can be displayed on CD-i machines. Library 10, PCDEXT.TXT (5,770 bytes).

Educational Programs—Information about four CD-i programs to help children learn about the Bible. Library 10, BIBLE.TXT (2,106 bytes).

CONSUMER REPORTS
(GO CONSUMER)

Look under menu Option 4, "Electronics/Cameras," and select "Interactive Multimedia" from the resulting menu for an overall assessment of the CD-i format and thoughts on what to expect from it.

MULTIMEDIA FORUM
(GO MULTIMEDIA)

Section and Library 17, "CD-i," are devoted to the format. Both have become major sources of information for CD-i developers. Consider this your first and most important stop for CD-i information. Files in Library 17 include:

Q & A—Answers to common questions about CD-i and CD-i development organizations and tools. CDIFAQ.TXT (30,466 bytes).

Updated CD-i News—*The Interactive Engineer* follows CD-i and other multimedia developments. Back issues are available; try this one first. TIE201.TXT (40,067 bytes).

Philips CD-i Catalog—The title catalog from Philips Interactive Media of America. PIMATC.TXT (41,502).

CD-i Directory—Lists companies and institutions related to CD-i. CDIDIR.TXT (47,422 bytes).

Professional Projects—Information on corporate and business CD-i projects in education, medicine, sales and more. CDIPRO.TXT (31,014 bytes).

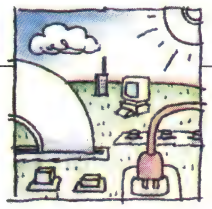
PHOTOGRAPHY FORUM
(GO PHOTOFORUM)

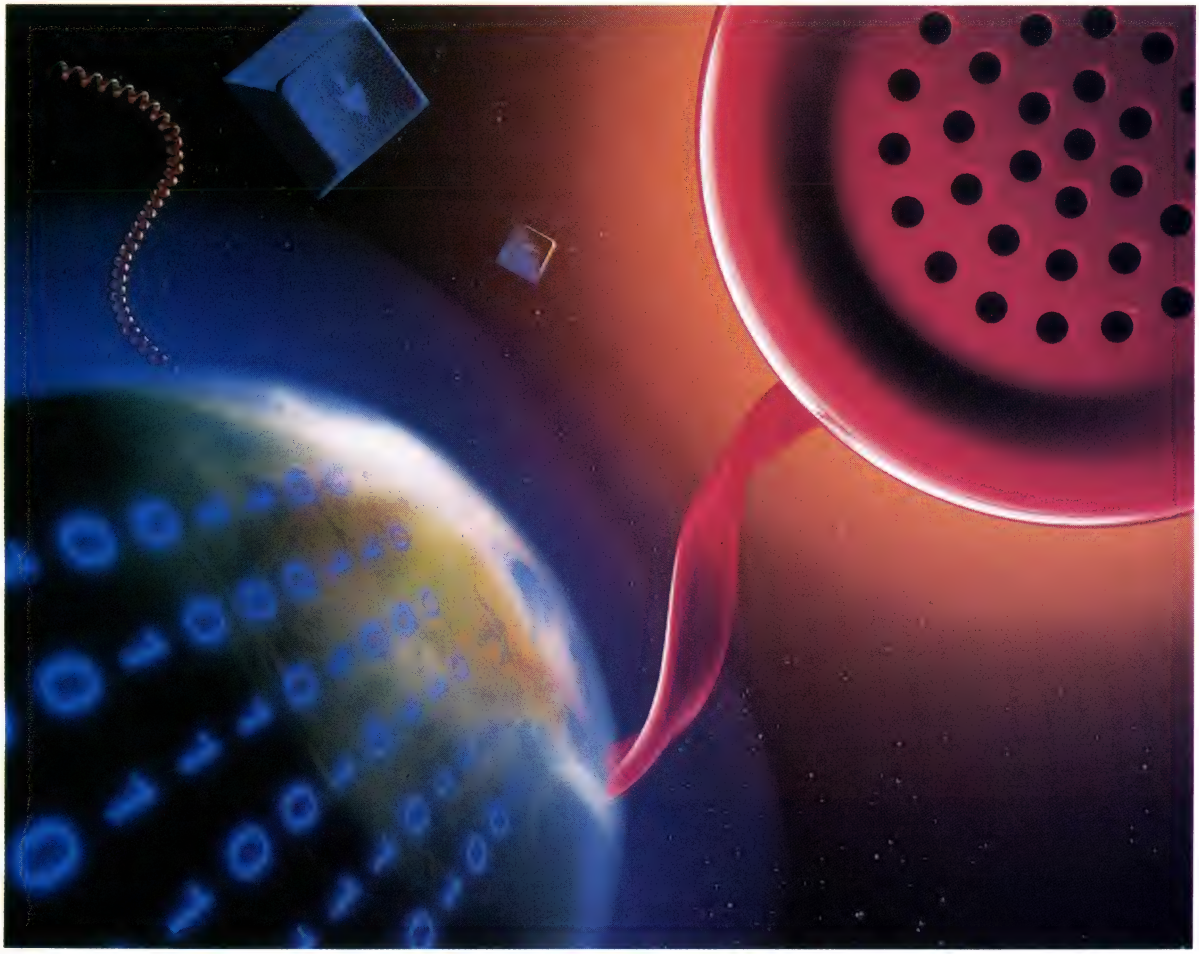
You'll find lively discussions about Photo CDs and digital imaging in Section 5, "Kodak Photo CD," and informative files in Library 5, "Digital Imaging." Files include:

Business List—List of businesses that have purchased systems to create Photo CD portfolio discs. BUILD.TXT (3,060 bytes).

Background Information—Learn about the three new Kodak Photo CD portfolio authoring software packages. PORTBG.TXT (11,222 bytes).

Format Information—Description of the Kodak Print Photo CD format. PRCDBG.TXT (10,777 bytes).





LIGHTSCAPES/THE STOCK MARKET

Two Cellular Standards Are Battling for the Day When We All Have Pocket Receivers

Away from the Phone? Nope!

by Cathryn Conroy

In a decade or so, chances are that as you prepare to go out to work, shop or play, you'll pack your personal cellular phone to take along.

Cellular phone technology is rapidly changing and expanding with the growth of digital systems that offer lower monthly rates, more privacy and a promise that these phones will serve as the platforms for future enhanced services, including call-screening and selective routing capabilities.

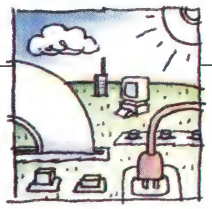
In North and South America, two types of digital cellular systems—Time Division Multiple Access (TDMA) and Code Division Multiple Access (CDMA)—are battling to become the standard, much like the VCR wars of a decade ago between Beta and VHS.

The two systems differ in the way they process and transmit cellular conversations and data, but it's impossible now for consumers to compare the two. While TDMA is already being offered by a number of cellular operators, including McCaw, Southwestern Bell Mobile Systems, BellSouth Mobile Systems, and operators in Canada and Mexico, CDMA isn't expected to begin commercial operation until 1995. U.S. West, New Vector, Pacific Telephone and Bell Atlantic are among the companies waiting for CDMA before they begin offering digital cellular service.

In Europe, Asia and Australia, the digital cellular phone standard is already established. The Global System for Mobiles (GSM) makes it possible to travel between European and Asian countries using the same phone. It is based on TDMA technology, but is incompatible with the U.S. system.

Analog and digital cellular phones primarily differ in the way they transmit calls. Analog cellular systems transmit calls between cell site radios, much like a two-way walkie-talkie. Digital cellular systems take the analog voice signals and code them into digital "ones" and "zeros" across the communication channel, allowing more conversations in the same amount of the radio spectrum.

What's the advantage of a digital cellular phone over the traditional analog model? For those who use their phones frequently, the cost can be lower over the long term, even though the initial price of the phone will be $800 or more—some $300 to $500 more than an analog unit. One reason for the higher prices is that digital phones offer more functionality, including both digital and analog capabilities—a feature that's im-



Getting Online from the Car, Yacht, Wherever

Using your cellular phone and laptop computer for data communications with CompuServe is easy with the right equipment.

Not all cellular phones offer data support. Be sure to ask if your model has this feature before you buy. Some that do include phones made by AT&T, Motorola, Nokia and NEC.

You'll also need a special modem, and one must-have feature is direct connection to the cellular phone bus. Without this, you'll need an expensive and cumbersome RJ11 interface box to log on. Another key feature is the modem's error-correction protocol: MNP-10 or ETC.

Lynne Gregg, a product manager with McCaw Cellular Communications Inc., routinely logs on to CompuServe at 2400 bps using her cellular phone, Compaq notebook computer and Compaq Speedpaq modem with MNP-10 error correction. "With most modems, including those designed for wireless use, 2400 bps for data communications is about the best you'll get today on cellular phones," she explains. However, optimizing your time online by using such tools as CompuServe Information Manager will reduce not only connect-time fees but also cellular phone charges.

Not satisfied with 2400-bps communications, AT&T Paradyne has developed its own error-correction standard to compete with MNP-10. The Enhanced Throughput Cellular (ETC), available in AT&T Paradyne's PCMCIA modem—the KeepInTouch Card—adds enhancements to V.32bis and allows data communications with CompuServe at 4800 bps.

Communication at 14,400 bps is possible when ETC is on both ends of the connection; however, since ETC is not on CompuServe's end, 4800 bps is the highest rate that will work, according to CompuServe member Bob Scott, manager of wireless data development with AT&T Paradyne in Largo, Florida. CompuServe's 800/544-3095 node works best for cellular communication with the KeepInTouch Card because it is the only node that allows access to all V.32bis rates from 4800 to 14,400 bps.

—*CC*

portant for someone who travels to nondigital towns and must rely on analog service. However, by late this year, this disparity should be eliminated for TDMA phones and by 1996 for CDMA phones.

While the phones cost more, the monthly fees for digital cellular users tend to be lower, especially as many operators give discounts and other incentives to encourage customers to go digital. For instance, McCaw Cellular Communications Inc. of Kirkland, Washington, which recently initiated TDMA digital service, offers digital rates of 10 percent to 20 percent less than analog plans.

"It's far more cost-effective to deploy digital cellular switches than analog. Carriers such as McCaw are passing the savings on to customers," says Lynne Gregg, a McCaw product manager and Telecommunications Forum (GO TELECO) member. Still, Gregg admits that if you use the phone only 30 minutes or so each month, such as for personal security or emergencies, analog service is the better deal.

Digital service is also cost efficient in Europe. In the United Kingdom, for instance, digital cellular users select a home cell. "All calls made from your home cell are charged at a much lower rate, so you can use it as you would a normal phone without the high charges," explains Martin Carr, a forum member and computer systems manager for Carrs Silverware in Rotherham, England.

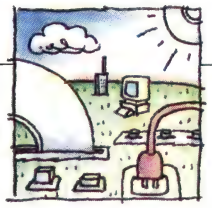
Greater privacy is another major feature of digital cellular phones. Anyone with a scanner can monitor analog cellular calls, while digital cannot be monitored because the signal is transmitted into a series of coded, digital bits. In addition, digital cellular calls have less static, the handoffs between cells are quieter and the battery life is significantly longer.

While cellular phones are viewed by most Americans and Canadians as a business necessity for executives on the go, they are still thought of as personal luxuries. That's not true in other parts of the world. Scandinavians consider their cellular phones to be a basic utility that is kept handy at all times. In such places as Russia and China, where the line-based telephone system is antiquated or nonexistent, cellular phones are the only reliable alternative. In Hong Kong and Singapore, beepers and pocket phones are the norm.

Forum member Jeff Harris, CEO of Jeff Harris-Fine Arts Inc. of Miami, Florida, frequently travels worldwide and relies on the European GSM cellular system to keep in touch with customers. "I can travel around Europe and whichever country I land in becomes my home base. If you call my office in Miami, you can be transferred to me immediately—even if I am walking the streets in Rome or sitting in a restaurant in Geneva," says Harris.

Knowing when to buy a digital cellular phone is as important as knowing what to buy. Olof Lundberg, an executive with Inmarsat in London, urges European consumers to buy second- or third-generation phones, rather than the latest product to hit the market. "When new, complex systems are launched, there will inevitably be initial bugs and imperfections that would be ironed out," says Lundberg, who also frequents the Telecommunications Forum. "The new digital systems are very software-intensive with advanced voice coding techniques that need to be tuned."

While Europeans and Asians can buy digital cellular phones with more assurance of the future stability of the technology because of the established GSM standard, North and South Americans aren't as fortunate. Since no standard has clearly emerged, consumers have a hard decision to make. TDMA is available in many locales and offers the ultimate in noise-free calls, but if CDMA wins the standards battle, what is now a state-of-the-art phone might land .in the basement closet next to the Betamax VCR. Because of this, according to Matt Desch, vice president of cellular systems for Northern Telecom in Richardson, Texas, only 50,000 of the 13 million U.S. and Canadian cellular phone users have decided to go digital.



"I would venture to guess that in 10 years CDMA will be predominant, but in the meantime, consumers are bound to be confused—and may be burned—by dual standards in the marketplace," says Telecommunications Forum member Jeremy Bond Shepherd of Redwood Shores, California. He thinks the U.S. cellular marketplace is hampered by allowing private forces to control the digital standard, rather than the government selecting one. In Europe, the decision to set the GSM standard was less market-based and more politically motivated by the European Community. "This would be one example of market regulation ultimately benefiting the consumer," says Shepherd.

Harris advises American consumers to wait a few years before taking the digital plunge. "There are only a couple of models of phones available. The main advantages of digital—caller ID, certain built-in voice mail capabilities, call return—are not available yet," he says.

Still, Bennett Kobb, an Arlington, Virginia-based consultant in radio communications policy, believes the best buy for American consumers is digital, since many cellular operators will eventually be phasing out their analog service.

Once a standard is set in the United States, the future for digital cellular phones is bright. The technology will allow a stunning array of features. Northern Telecom's Desch predicts that these will include integrated alphanumeric paging with messages up to 64 letters long, and more integration between cellular phones and pagers. Users will be able to plug a laptop computer directly into the phone and connect to CompuServe at 9600 bps without using a modem and still retain the connection over handoffs between cell sites. "The U.S. cellular network will be used more and more as a nationwide local-area network for all kinds of devices that will transfer information using the cellular airwaves," forecasts Desch.

As additional competition from new cellular operators puts pressure on the established carriers, lower prices and new services will emerge. Cellular phones will no longer be just for the traveling executive, but rather a common utility for many.

Cathryn Conroy is senior writer of CompuServe Magazine. *Her CompuServe User ID number is 70007,417.*

Phone Info: Cellular Files and Resources

To learn more about digital cellular phones worldwide, consult the Broadcast Professionals Forum (GO BPFORUM), Library 14, "General and Help"; the Consumer Electronics Forum (GO CEFORUM), Section and Library 14, "Cellular/Paging"; and the Telecommunications Forum (GO TELECO), Section and Library 9, "Cellular/PCs." Search for files of interest using such keywords as DIGITAL, CELLULAR, TDMA, PRIVACY, PHONES or PORTABLE. A sampling of files:

Cellular Telephone Billing Program—Invoice for individual users of a group cellular telephone billing statement. Shareware, $20. Broadcast Professionals Forum, PHONE.ZIP (99,523 bytes).

Cellular Phones on Aircraft—Plain language explanation of why cellular phones can't be used on aircraft. Broadcast Professionals Forum, AIRCEL.TXT (7,999 bytes).

Cellular Phone Buyers' Guide—Includes portable and mobile phones with "best buys" and shopping sections. Consumer Electronics Forum, CELFON.93 (15,693 bytes).

Is Cellular Doomed?—Information on recent news reports linking portable cellular phones with brain tumors. Consumer Electronics Forum, DOOMED.TXT (8,248 bytes).

Europe's GSM—Personal experiences with the United Kingdom's cellular network. Telecommunications Forum, GSM.TXT (5,885 bytes).

GSM Roaming Agreements—European roaming agreements that allow cellular phone use in various countries. Telecommunications Forum, GSMEUR.TXT (2,777 bytes).

Cellular Technology Explained—Brief summary of cellular technology. Telecommunications Forum, CELTRM.TXT (6,540 bytes).

GSM and TDMA Problems—Explanation of intrinsic problems in time division technology. Telecommunications Forum, TDMAGS.TXT (36,169 bytes).

Hundreds of articles on cellular phones are available in Computer Database Plus (GO COMPDB). Search using general keywords, such as CELLULAR and DIGITAL CELLULAR or the names of manufacturers, such as MOTOROLA or NOKIA. A sampling:

"Wireless Is Now," *Teleconnect*, November 1993. Reference #A14755875 (full text and abstract).

"Mobile Messaging," *LAN Magazine*, October 1993. Reference #A14390660 (abstract only).

"Cellular Phones: Some Like 'Em and Some Don't," *PC Week*, June 28, 1993. Reference #A13987823 (full text only).

"Cellular Phones: Expensive Toys or Helpful Tools?" *Government Computer News*, June 7, 1993. Reference #A13965279 (full text and abstract).

Consumer Reports (GO CONSUMER) offers "Cellular Telephones," an overview of cellular phones available in the United States. (Jan. 1993). The article offers buying tips and information on how the phones work (GO CSR-8367).

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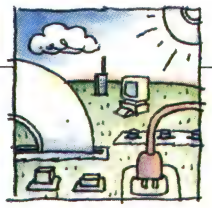
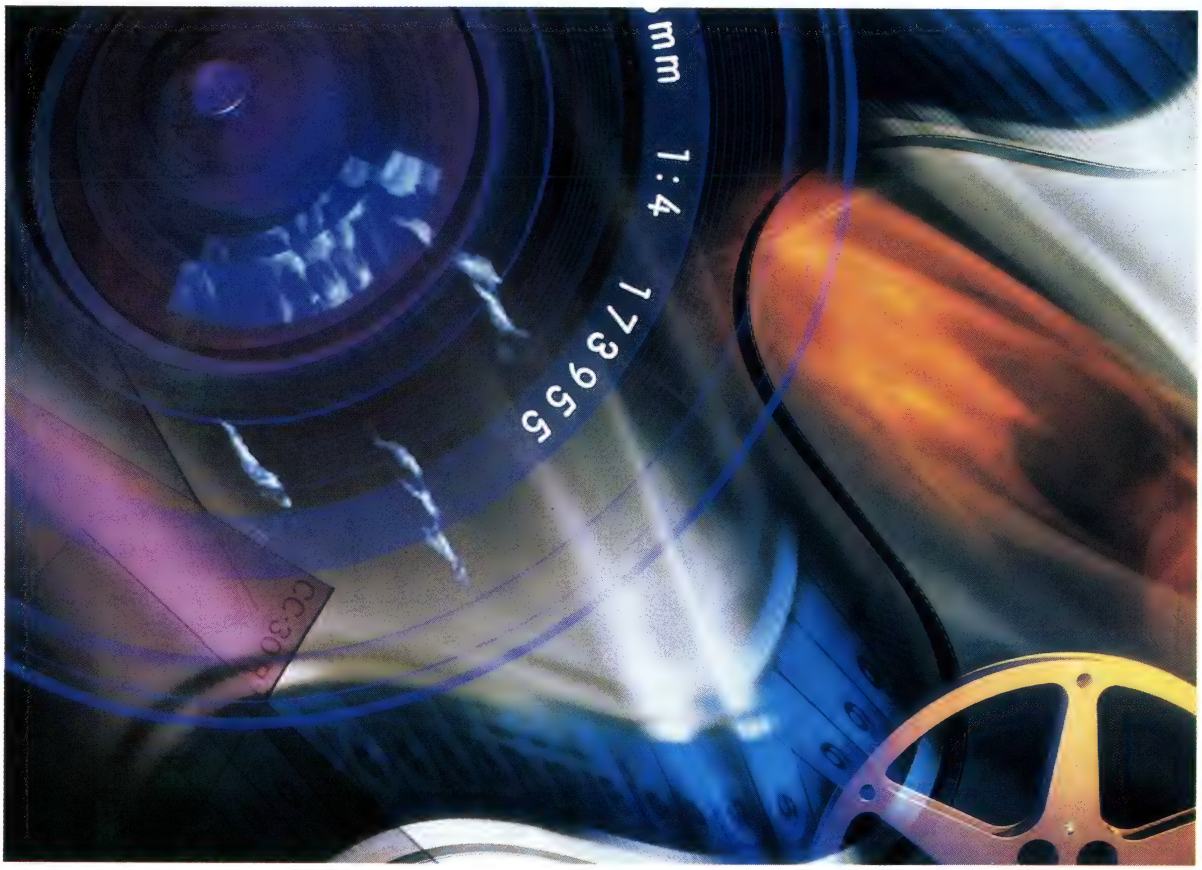
**Source: Lipper Analytical Services, Inc.; total returns for the S&P 500, 12/31/91–12/31/93 and 12/31/92–12/31/93: 18.43% and 10.06%, respectively. Dreyfus Service Corporation, Distributor.





LIGHTSCAPES/THE STOCK MARKET

An Aural Report on Buying the Thrills of Surround-Sound Home Theaters

Cinematic for the People

by Martha Barnette

Whether it's the rib-rattling whoosh of a *Top Gun* fighter jet or an eye-popping shootout at the Intergalactic Corral, big-screen excitement can be as close as your living room, thanks to technology that gives new meaning to the term "home movie." These thrills aren't cheap, however. A good home movie theater can cost around $3,000, while more elaborate ones run as high as $200,000.

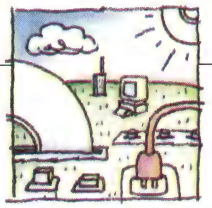
Between those extremes lies a host of fast-changing, often controversial options—which is why serious audiophiles regularly consult the Consumer Electronics Forum (GO CEFORUM) to keep up with industry news and find out how to get more boom and brilliance for their bucks.

Home audio has come a long way since the clunky "quadraphonic" sound of the 1970s. Dolby Surround ushered in a new era of cinematic sound, enabling commercial theaters to augment their ordinary stereo channels with two additional channels, the center-front and rear. Later, Dolby Pro Logic offered still more improvements, including a fifth channel to enhance the clarity and placement of on-screen dialogue. Now movie theater enthusiasts can retrieve that additional sound information on their home systems, with a new generation of audio/video receivers that combines system amplification, Dolby Pro Logic decoding and component switching, all in one black box, costing anywhere from $250 to $1,500.

Some of the most lively discussions about home theater concern yet another refinement of Dolby sound: home THX theater, which involves systems and components certified to meet standards and specifications developed by Lucasfilm Ltd., the creators of *Star Wars*. While theoretically superior in some ways to Dolby Surround, THX is vastly more expensive. And some insist that Dolby Pro Logic can be tweaked to sound even *better* than THX. According to Marc Wielage, sysop of the Consumer Electronics Forum, "Dolby Pro Logic is the only kind of surround-system anybody should be using in their homes."

For putting together your own home theater, many forum members say your top priority should be speakers. "Focus on sound first and foremost," says John Small of Arlington, Texas. "You have to get both the sound and picture right. But big, high-fidelity sound optimized for TV and movies with a clean small picture is much better than loud-but-low-fidelity sound combined with a big, low-fidelity picture."

At the very least, a home theater requires four speakers. Audio aficionados insist, however, that it's infinitely more satisfying to have a fifth one, the front-center channel speaker, which greatly



Is Home Theater Nothing but a 'Guy Thing'?

No matter how liberated you may be, it's difficult to shake the notion that home movie theaters are almost exclusively "boy toys." Maybe it's just hard to imagine women mustering the same enthusiasm for feeling "the power of a punch" during fight scenes, delighting in the amplified smack of football helmets, or fondly comparing relative tweeter size and screen inches.

One glance at the popular salesroom demo discs featuring shapely models wearing little more than high-infidelity smiles will erase any doubts that the target audience for home theaters is largely male. "Wife Affinity Syndrome," or "WAF," is a common topic of conversation between male salespersons and customers, says home theater buff Al Woodcock of Cleveland, Ohio.

SUZANNE ENGELMANN

Straightforward advice from a home-theater woman: Gordon

The question of why this technology appeals primarily to men—as well as how to convince wives that no home is complete without it—prompted a lively discussion recently in the Consumer Electronics Forum (GO CEFORUM).

Practical suggestions traded among (male) forum members included: Keep speaker cable clutter to a minimum, select movies with more "nature type" surround sounds, and avoid the temptation to adjust and re-adjust the controls when your significant other is in the room. "My wife got real tired real fast of seeing my butt and listening to the test tones," one advised, adding: "Don't try to force her to like it. My wife just smiles one of those faint Mona Lisa smiles when I try to explain how great this all is."

Another important selling point is the movie you choose to show off a system's full range of capabilities. Consumer Electronics Forum member David J. Bondelevitch, who teaches a class in film sound at the University of Southern California's distinguished film school, suggests the following big, bold titles: *Alien* and *Aliens, Apocalypse Now, Back to the Future, Blade Runner, Die Hard* and *Die Hard 2, Bram Stoker's Dracula, Terminator 2, Unforgiven,* the *Star Trek* series (especially II, IV and VI), the *Star Wars* trilogy, and two of the three *Indiana Jones* films—*Raiders of the Lost Ark* and *The Last Crusade.*

Meanwhile, for the woman who does develop a case of speaker envy or laserdisc lust, there's straight talk and friendly advice waiting in the forum, says Sysop Dawn Gordon, a home theater owner herself. "That's why many women love the forum. We treat everyone the same—with honest and accurate information, and we have nothing to sell, so you always get the real story."

—MB

enhances the crispness and placement of dialogue. In addition, a separate subwoofer can make a huge difference, by providing industrial-strength bass. "When I watch the *Star Wars* laserdisc, I *feel* the explosion of the death star, thanks to the subwoofer," exults Mark Booth of San Diego, California. "I hear the fleeing ships fly right over my head, thanks to the surround speakers."

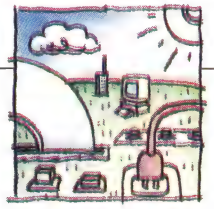
Be aware, too, that your existing audio speakers may not be compatible with a home theater system. If, for example, they're "unshielded" and placed too close to the monitor, their magnetic fields will distort the picture. Small, in fact, advises against trying to make a home theater do double duty as a high-end audio system. "Provide two centers of differing entertainment—and therefore less family conflict—and eliminate the equipment compromises that invariably plague a dual setup." (For more about family conflicts over home movie theaters, see "Is Home Theater Nothing but a 'Guy Thing'?" above.)

Determining just where to place those speakers can be tricky, and it's a topic that frequently arises in forum discussions. Unlike front speakers, surround speakers are designed to provide a diffuse sound field. Ideally, you shouldn't be able to tell where those speakers are. Getting this right requires not only technological know-how, but also old-fashioned trial and error, says forum member David J. Bondelevitch, an instructor in film sound at the University of Southern California. "Basically, what works is what sounds best," he says. In addition, you'll need sound and video sources, such as a quality laserdisc player and S-VHS deck, both of which have about twice the fidelity of a standard VHS deck, says Small.

Deciding how to project those hi-fi images raises still more questions: Do you want a regular TV monitor? A rear-projection screen? A front-projection screen? Here, your least expensive option is a TV tube screen, such as a 27-inch monitor, but you'll sacrifice some size. At the other end of the scale are front projectors, which can run about $7,000 for a mid-range model. They offer the advantage of large-scale images, but can be quirky to use and therefore may not be a good choice for a beginner, says Small. And unless you invest in a motorized drop screen, you face the problem of having several square feet of screen taking up wall space when you're not using it.

On the other hand, rear-projection screens are smaller, often having a 40- to 70-inch diagonal. However, they're less expensive (with good ones starting from around $2,200), sleek-looking and perform better than front-projection systems in a room that's not completely dark.

When shopping for a screen, take along a favorite laserdisc rather than relying on showroom demos, and insist on viewing your top choices side by side, advises forum regular Al Woodcock of Cleveland, Ohio. "This is a big headache for the retailer, but



Read More About It

For a better look at the big picture concerning home movie theater technology, check out these online resources:

CONSUMER ELECTRONICS FORUM
(GO CEFORUM)

Pioneer Home Theater Demo—A colorful, interactive introduction to home theater, plus tips on how to upgrade your current system. Audio/visual glossary, product catalog and more. Library 2, "Video Hardware," PIONER.EXE (1,376,264 bytes).

Q&A on Home THX—A primer on the technology behind THX surround sound. Library 3, "Audio Hardware," HOTHX.TXT (26,316 bytes).

Amp Configurations—What's the optimum amplifier configuration to use with an external Dolby Pro Logic decoder such as the Lexicon CP-1? This concise thread discusses several options. Library 3, 3CHAN.THD (14,416 bytes).

Top Laserdiscs—A message thread on *Billboard* magazine's top-rated laserdiscs. Library 4, "Video Software," BESTLV.THD (2,061 bytes).

Recommended Laserdiscs—A list of personal favorites compiled by forum member B.G. Sherris. Library 4, BESTLV.91 (1,321 bytes).

MAGAZINE DATABASE PLUS
(GO MAGDB)

"Speakers for Home Theater," *Stereo Review*, September 1993. Reference #A13242385.

"Surround Solution," *Video Magazine*, June 1993. Reference #A13906614.

"How to Tweak Your Rear-Projection TV for a Perfect Picture," *Video Magazine*, April 1993. Reference #A13770186.

"How to Buy a Home Theater," *Video Magazine*, May 1992. Reference #A12419233.

CONSUMER REPORTS
(GO CONSUMER)

General information on buying surround-sound speakers as compiled by *Consumer Reports* magazine, plus ratings of 28 models tested as of March 1992. Select "Electronics/Cameras" from the *Consumer Reports* menu to find the entry for "Speakers, Surround-Sound."

—MB

invaluable to the buyer," says Woodcock, who figures he saved $600 when he compared two screens this way and found the less-expensive one to be of comparable quality. Experts advise taking time to watch screens with the sound off, so you can concentrate on the visuals. Also bear in mind that what looks like a monster screen in the showroom often seems much smaller when you get it home.

The question of how much to spend on which components is fuel for many forum debates. Woodcock suggests fighting the natural tendency to set a budget up front. "Better to buy a system over a year or two than to cut corners on essentials."

Small adds that it's important to plan carefully, bearing in mind how the whole system will work. If you buy a monitor first, while planning to work out the sound later, you may be tempted to add other mediocre components piece by piece, trying to make incompatible pieces work together. "You end up with too much spent for poorly optimized component parts before you know the trap you've fallen into."

Booth agrees that it's important to keep in mind "the big picture," making sure at the outset to allocate approximately 40 percent to 50 percent of your budget for the speakers: "At first, I spent too much of my equipment budget on the Pro Logic decoder and laserdisc player, and way too little on the speakers. I ended up upgrading my speakers very quickly."

Bondelevitch believes in getting everything you need at the start. "You don't want to have to upgrade your equipment every few months." Consider also saving some headaches by hiring one of the growing number of companies that will install such systems for you. It's important to be aware of potential drawbacks with such systems, such as the fact that off-air TV and cable reception may be compromised, he says.

Even after you've purchased your system, it's important to stay on top of developments in the field. All the more reason to stay tuned to the Consumer Electronics Forum for previews of coming attractions. "Everyone has a biased opinion and good reasons for it," Woodcock says. "In the end, you have to go with your own ears, but at least you have something to start with."

Martha Barnette is a Louisville, Kentucky, writer and author of A Garden of Words *(Times Books/Random House), a collection of lighthearted essays on word origins. Her CompuServe User ID number is 75300,3140.*

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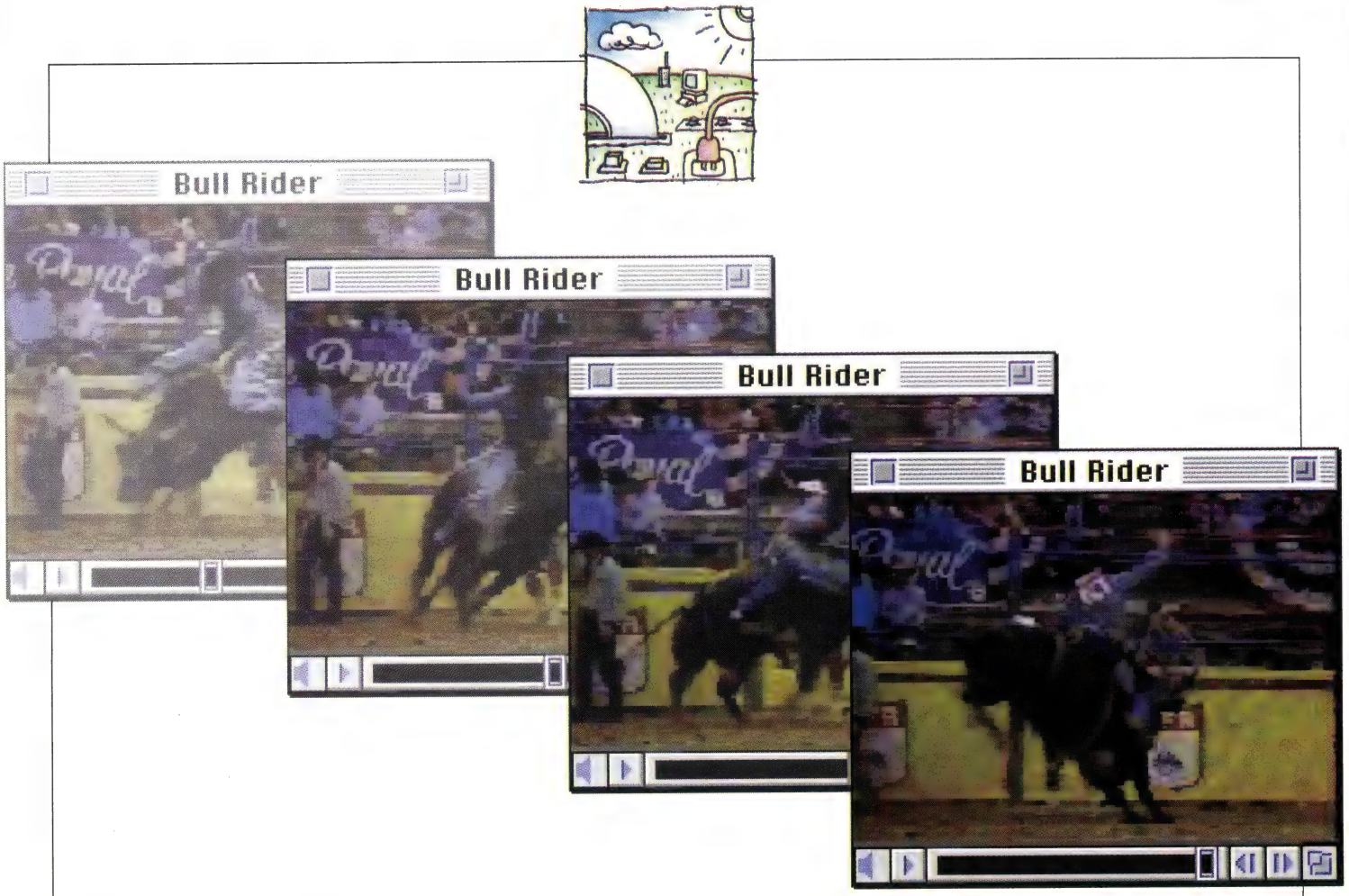


Macintosh's Video-Clip Software Is Changing How We Share and Save Memories

A QuickTime Capsule

by John Edwards

Home movies! The term conjures up memories of jittery pictures projected in a darkened room in front of restless friends and relatives.

But home movies, like so many other parts of our lives, are being transformed by technology into something startlingly new and different. Family flicks are now entering the high-tech world of computer imaging, as the members who meet in the Macintosh Multimedia Forum (GO MACMULTI) will gladly tell you.

Apple Computer's sophisticated Macintosh QuickTime software is the driving force behind today's leading edge, camcorder-produced home movies. With QuickTime's multimedia capabilities, amateur film buffs can bring their home movies out of the darkened room and onto a computer screen. They also can give their homebrew productions some of the "look and feel" of a major Hollywood production. QuickTime is compatible with all color-capable Macintosh computers using a 68020 or higher processor.

Besides the bare-bones System 7 extension, available in the Macintosh Developers Forum (GO MACDEV) (see "Movies and Utilities," p. 14), Apple offers the QuickTime Starter Kit, a $169 package that gives Mac users all of the software needed to begin creating and viewing QuickTime movies. The kit also includes a CD-ROM disc that contains a selection of clip video, animated graphics and still images suitable for business or classroom presentations.

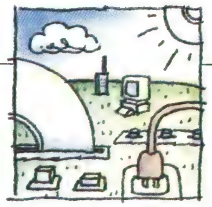
Einar Skjorten of Hosle, Norway, is a Macintosh Multimedia Forum regular and prolific QuickTime movie producer. "The idea of storing video of memorable events on my computer has fascinated me ever since QuickTime was just a rumor," says Skjorten, who works for one of the largest engineering consulting firms in Norway.

One of Skjorten's first productions was of a family Christmas dinner in 1992. The one-minute video in a 200- by 150-pixel window runs about 10 frames per second. "The challenge in this 'greeting to the future' was to condense 10 to 15 minutes of home video and catch the mood and essence of the event," says Skjorten.

Another one of Skjorten's favorite home movies is a 33-second QuickTime clip of some Mexican friends who visited Norway last summer. "By spending an hour in condensing the event into a QuickTime movie, we have a much more interesting archive of events than we have on videotape. And much more accessible—which means we really look at them from time to time. We seldom make the effort to search through a number of tapes to find an event we would like to see."

Mike O'Connor of Huntington, New York, sysop of the Macintosh Multimedia Forum, notes that transferring a video-based home movie to a Macintosh requires the use of a camcorder, QuickTime and a "digitizing" add-in board. The new "AV" Mac computers come with the hardware built in. On other Macs, you can get boards such as VideoSpigot (Creative Labs Inc., Milpitas, California) or MovieMovie (Sigma Designs Inc., Fremont, California), notes O'Connor. The technology represents an investment of between $400 and $1,000 (depending on the quality of the board and any optional support products), not including the Mac and camcorder.

Installing and configuring a QuickTime setup is simple. The digitizer board usually has a composite video jack that can be plugged into a TV, VCR, laserdisc player or



'Screening' Your Mac Movie

Once you've created your first QuickTime home movie, you'll want to share it with others. The best way of doing this is to upload your epic to the Macintosh Multimedia Forum's (GO MACMULTI) Library 3, "Home Movies."

Uploading a QuickTime movie is like uploading any other data or graphics file. But Mike O'Connor, the forum's sysop, says new movie makers should keep a few key points in mind before unleashing their creation on an unsuspecting public.

QuickTime movie producers should strive to keep their presentations short and interesting. "Movies can take up huge, heaping gobs of disk space. So big, that it would take forever to upload or download," O'Connor notes. He suggests reducing the movie's screen size or the number of frames displayed per second to cut down the file length and to make the movie playable even on less powerful Macs. "Even though movies are compressed, you can usually compress them more by using StuffIt or Compact Pro-type utilities," he adds.

A 100K movie is good, a 1MB movie probably should have something "really cool" in it and a 2MB movie is the most anyone might try to download, according to O'Connor.

In addition, it's critical for QuickTime producers to pay close attention to intellectual property rights. "Be careful to make sure you don't upload any material you don't have rights to," O'Connor notes. This is rarely a problem with home movies, but can become a matter of concern when members mix home-shot material with commercial footage. If in doubt, ask the forum staff for guidance.

Jack Herlocker, who produces business-related QuickTime movies, feels that good editing software, such as Adobe Systems' Premiere, is virtually indispensable if you plan to present your QuickTime epic to the public. "The ability to provide fancy transitions between cuts and overlay text quickly and easily makes a big difference," he says.

QuickTime home-movie enthusiast Einar Skjorten says novice movie makers shouldn't be put off by QuickTime's limitations and supposed complexity. "The capture and editing technique isn't much harder to learn than advanced use of Microsoft Word, and it's much more fun," he says.

—JE

camcorder. Once the necessary connections have been made, a window appears on screen showing the video image. Simply set things up and hit "record" on the software.

Playing back movies is just as easy, either with a commercially available program or one of the many different viewer utilities located in the Macintosh Multimedia Forum libraries (see "Movies and Utilities," p.14). With QuickTime installed, double-click your movie-playing application, then use the Open command in the file menu to play the movie.

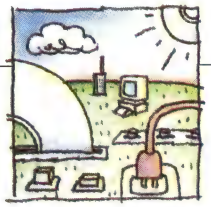
Almost all QuickTime-compatible programs show movies in the same way, according to O'Connor. Along the bottom of the movie is usually a standard controller with a Play/Stop button, volume control, frame forward/back control, and a slider for positioning and selecting. You can select or copy and paste movies the same way you do with text and pictures. If you paste a movie into software that can't play it, it will paste a picture of the first frame.

When producing a QuickTime movie, it's important to grab the viewer with concise, memorable images. "The attention span of a viewer is always much shorter than I expect," notes Skjorten. Another tactic he recommends is enlivening the movie with some simple yet impressive video effects such as a brief title stating the event and date, transitions to make a smooth flow between scenes, and background music. Skjorten adds effects to his movies with the Adobe Premiere image editing program (Adobe Systems Inc., Mountain View, California), but "simpler and less expensive graphics tools can also do the trick," he says.

Member Mark Koldys, an attorney in Dearborn, Michigan, hasn't yet created any QuickTime home movies, but the technology has allowed him to create a visually oriented database representing his personal videocassette and laserdisc collection. "I have assembled QuickTime clips that I can play with the click of a button in the FileMaker Pro database manager (Claris Corp., Santa Clara, California)," he says. Koldys generally uses the coming attractions from the movies as the source for his QuickTime clips. When they aren't available, he assembles a scene or two from the film in Adobe Premiere and makes his own samples of the movie. "Nothing very advanced at all, but a harmless way to spend hours and use up lots of disk space," he says.

For member Jack Herlocker, a technical support analyst for Sprint-United Telephone in Carlisle, Pennsylvania, QuickTime movies have become a valuable business tool, particularly as a technique for displaying business presentations on new products.

Herlocker recently put together a QuickTime movie of a telecommunications product that had just passed its first prototype test. "In the formal presentation, the clip ran silently on a PowerPoint (Microsoft Corp., Redmond, Washington) presentation slide in a loop. Informally, our field representative ran the clip off his PowerBook with sound, which included a voice-over



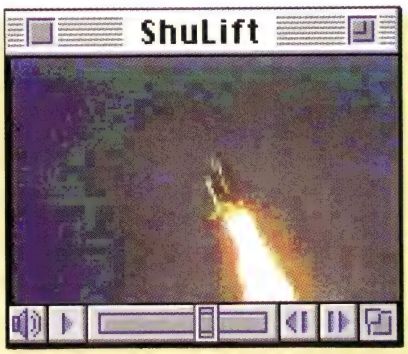
Snow ride on a little engine that could: SNOMOB.SEA

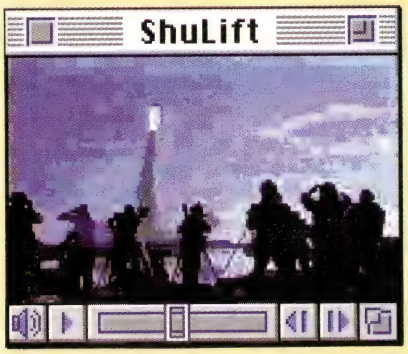
explaining what was happening." Herlocker recalls that the clip began life as 20 minutes of tape shot by someone who was present at the product's test. "I boiled that down to about 90 seconds that showed what the unit was actually capable of," he says.

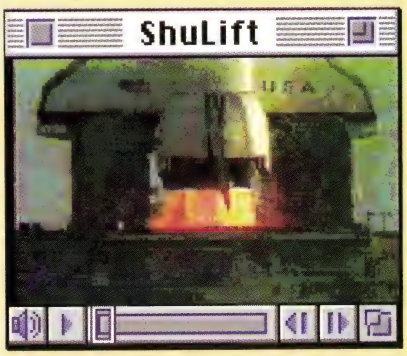
The advantage of using QuickTime video in a presentation is that it feels "real" to an audience. "The reaction, especially from an unprepared audience, is greater than with static slides," Herlocker says.

He notes that while QuickTime isn't an inherently complicated technology, it definitely is a sophisticated visual art that requires plenty of practice. "Before users commit to anything in QuickTime video, they need to play around with the technology to find where the limits are. The learning curve is *not* trivial."

John Edwards is a contributing editor of CompuServe Magazine. *His CompuServe User ID number is 70007,412.*







A heated escape: LIFTOF.CPT

QuickTime Movies and Utilities

Budding movie makers will want to view a variety of QuickTime files for both practical and artistic inspiration. The various forum libraries also contain key QuickTime tools that can help members make interesting and polished productions.

MACINTOSH DEVELOPERS FORUM (GO MACDEV)

QuickTime 1.6.1—Apple Computer's QuickTime extension to System 7. Library 8, "Apple System Files," QT161.SIT (598,528 bytes).

MACINTOSH MULTIMEDIA FORUM (GO MACMULTI)

Grand Canyon View from a Ranger Station—A panoramic view of the canyon. Library 3, "Home Movies," MVGC3.SIT (1,195,008 bytes).

Shuttle Liftoff—A space shuttle ascends from the Kennedy Space Center. Library 3, LIFTOF.CPT (1,529,344 bytes).

Snowmobile Outing—Member Alan Samuel and friends whoop it up in a snowmobile. Library 3, SNOMOB.SEA (1,783,168 bytes).

Dueling Mustangs—A quarter-mile drag race shot at RaceWay Park in Old Bridge Township, New Jersey. Library 3, MUSTNG.SIT (733,952 bytes).

Bull Ride—A 1.2-second clip of the second-longest bull ride in National Finals Rodeo history. Library 5, "Video Clips," BULRID.SIT (214,272 bytes).

Hydro Crash—A hydroplane flips over during a race on Seattle's Lake Washington in August 1993. The driver escaped with only minor injuries. Library 5, HYDROC.SEA (1,044,736 bytes).

Chris—Member Jack Nelson morphs his son Chris from ages 3 to 5 to 9 to 21. Library 5, CHRIS.SIT (307,840 bytes).

Metamorphosis—A QuickTime morphing utility. Library 7, "QuickTime Tools," METAMO.SIT (141,952 bytes).

EasyPlay 2.0—A QuickTime movie cataloger. Library 7, EZPLAY.SEA (87,424 bytes).

HyperMovie Player—A HyperCard-based QuickTime movie player. Library 7, HYPMVP.CPT (126,464 bytes).

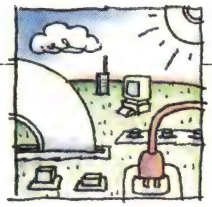
TheaterMaker 1.0.2—Play your QuickTime movies in a frame simulating a theater, TV room, drive-in and other locales. Library 7, THEATR.SEA (219,520 bytes).

Popcorn 1.0.1—A popular QuickTime movie viewer and editor. Library 7, PCN101.SEA (84,096 bytes).

MULTIMEDIA FORUM (GO MULTIMEDIA)

Betty Boop—She sings in a public-domain cartoon. Library 5, "Macintosh/Apple II," BBCLIP.SEA (725,888 bytes).

Premiere First Thoughts—A user's first impressions of Adobe Systems' Premiere image editing software. Library 5, PREM.TXT (11,856 bytes).



PETER ANGELO SIMON/THE STOCK MARKET

The Movie Medium with a Long Life, Cool Features and Hard Sell

Warming Up to Laserdiscs

by Jan Smith

Just as the CD has pounded the nails in the LP record's coffin, some experts predict that the laserdisc might someday do the same thing to VHS.

Although such predictions are premature, roughly a million consumers in the United States have enthusiastically adopted laserdisc players. Attracted by the excellent picture and sound quality, many owners of laserdisc players have upwards of 1,000 titles in their collections, from old film classics such as *Casablanca* to special editions of sci-fi thrillers such as *The Abyss*.

Invented more than a decade ago, laserdisc players resemble CD players, except the discs are larger—8 or 12 inches in diameter—and laserdiscs record and display video as well as audio. The players use a low-level laser beam to scan and play digitized movies, which are recorded in microscopic pits and flat areas optically carved in the disc. Because the playback mechanism never touches the disc, you can play them over and over again with no loss in quality.

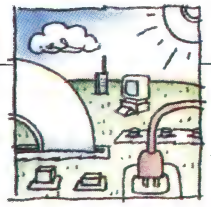
At $500 to $1,500, laserdisc players are more expensive than VCRs, but the attraction of laserdisc technology is the quality. According to aficionados, there's no comparison—up to 430 lines of resolution for a laserdisc, compared with 200–250 lines in VHS videotape, along with CD-quality audio.

Besides excellent quality, the more expensive laserdisc players provide features unavailable or of low quality in VHS, such as reverse motion and freeze frames, allowing fans to examine the construction of their favorite movies in exhaustive detail. Many discs include still photos of the making of a movie, reproductions of the movie script, footage cut from the final version and even alternate endings. The package can be irresistible.

"My favorite feature is the alternate audio track. Laserdiscs have four channels of audio information," says Dan Margules, a member of the Consumer Electronics Forum (GO CEFORUM) and San Diego-based writer planning to launch a new laserdisc magazine later this year. "The movie's soundtrack goes on two of them (if it's in stereo), and the extra tracks may contain a spoken word, scene-by-scene analysis of the movie by a film historian or comments by the film's director. It's like being in film school."

Laserdiscs come in two formats—CAV (constant angular velocity) and CLV (constant linear velocity)—based on how a frame of video is stored on a disc. CAV discs spin at a constant rate (1,800 revolutions per minute). Since video frames use the same rate, each frame, or picture, occupies one revolution of the disc. That makes CAV ideal for such special features as freeze-frame. However, CAV discs have very short playing time—a 12-inch disc holds only 30 minutes of video per side—so feature-length movies require multiple discs.

CLV, the more common format, allocates a specific length of track for each frame—one frame per track near the center, where



Latest on Laserdiscs: Forum Files

For more information on laserdiscs and laserdisc players, consult these files in the Consumer Electronics Forum (GO CEFORUM):

Laserdisc Specs—Explanation of technical specifications of laserdisc performance, including signal-to-noise ratios, luminance and more. Library 2, "Video Hardware," LVSPEC.THD (12,513 bytes).

1993–94 Guide to CD and Laserdisc Players—Introduction to basic CD and laserdisc player features, including recommendations for medium-priced CD players, CD changers and combo CD/LV machines, by Assistant Sysop Marc Weilage. Library 3, "Audio Hardware," DISC93.TXT (19,125 bytes).

Laserdisc Release Report—Weekly update from Evergreen Entertainment lists movie titles released on laserdisc in the past four months or scheduled for future release. Main reports are in Library 4, "Video Software," in RELIST.ZIP (25,081 bytes) and RELST2.ZIP (25,408 bytes); search using the keyword EVERGREEN for the current update. Future releases are in RELFUT.ZIP (10,658 bytes).

Laser Video Library—Online catalog of 90 available laserdisc titles, including rent criterion, THX and other extra-feature laserdiscs by mail. Library 4, LVLCAT.TXT (52,382 bytes), LVLS1.TXT (11,092 bytes), LVLS2.TXT (18,219 bytes) and LVLS3.TXT (29,062 bytes).

Laserdisc Catalog—DISCTRAK, a DOS-based program for cataloging laserdiscs. Shareware. Library 4, DT170.ZIP (210,432 bytes).

Laserdisc Protective Covers—Tips and specific sources on plastic covers for laserdisc jackets. Library 4, LVCOV.THD (3,430 bytes).

Are Laserdiscs Passé?—Forum thread on whether laserdiscs will give way to the next generation of CD-sized video discs. Library 4, LVPAST.THD (14,694 bytes).

Field-Frame Differences—Discussion on the differences between "fields" and "frames" as they apply to video transfers and laserdiscs with an emphasis on how CLV discs compare to CAV transfers. Library 4, FLDFRA.THD (21,088 bytes).

Letterboxed Laserdiscs—Listing of available and upcoming letterboxed and matted laserdisc releases. Library 4, LBOXLV.LST (26,073 bytes).

the tracks are short, to three frames at the edge, where the tracks are longer. The spin rate changes depending on the position of the laser scanner. CLV discs have twice the playing time (one hour per side) of CAV discs, making them more popular, but special effects are more difficult to attain. Better laserdisc players restore special effects to CLV discs by using digital frame memory, which stores a frame in memory as it is read from the disk, then plays it back again and again from memory instead of reading it from the disk.

THX is another term applied to laserdiscs. Sponsored by Lucasfilm, THX is a technical standard and certification process for both hardware (amplifiers, speakers and surround-sound decoders) and software. The goal is to ensure that discs reproduce film soundtracks in your living room as perfectly as possible.

Basic laserdisc players provide digital sound and an infrared remote control. Full-featured models automatically play either side of a disc, provide field special effects for producing slow-motion and freeze-frames from all discs, regardless of format, and offer more elaborate remote-control features, such as a jog/shuttle dial that makes it easy to get to a specific frame. Many models, called "combi players," play back either laserdiscs or 5-inch compact discs; some players even include built-in karaoke.

Unlike computers and their peripherals, which seem to need continual tweaking to be kept in top working order, laserdisc players are generally trouble free. So the denizens of the Consumer Electronics Forum gather more often to talk about the latest technology and newest titles than to troubleshoot operating problems.

"Where else can you rub electronic elbows with writers (David Gerrold of *Star Trek* "Tribbles" fame), directors of photography (Rob Hahn of *Batman Returns* and *The Addams Family*), movie and video transfer specialists (Marc Wielage), directors (Phil A. Robinson of *Field of Dreams*), and film reviewers such as Roger Ebert?" asks Robert A. Fowkes, a forum member from Yonkers, New York, who claims a "modest" collection of 1,200 discs. "If you want to find out something about any aspect of consumer electronics and home entertainment, the experts, famous, infamous and anonymous, are all in the forum."

Despite their relatively low profile, laserdiscs are nearly as widespread as VHS tapes. More than 11,000 titles are in distribution, according to David Goodman, president of U.S. Laser, a company that distributes discs and publishes *LaserViews* magazine.

Titles include movies, television compilations, educational materials, animation and even music discs. The average disc sells for $30–$40, with special editions costing up to $125 and discontinued discs for as little as $5. Laserdiscs also can be rented at video stores in larger metropolitan areas or by mail order.

Despite their popularity, laserdiscs will probably not replace VHS in U.S. homes for several reasons: You can't record on a laserdisc the way you can with videotape; and most people are happy with the quality of VHS tapes and would rather rent a movie than own it.

"There was a time when the industry expected laserdiscs to make VHS tapes obsolete, at least for pre-recorded material, the way the CD did away with the vinyl LP," says Margules. "That's not going to happen. The market is still growing, but the growth is slowing down. The main reason is that laserdisc is primarily a sell-through market, while video tape is still primarily a rental market."

Not surprisingly, laserdisc owners are passionate about their hobby, continually demonstrating the medium's superior quality to friends and family.

"My brother-in-law could not talk my sister into a laserdisc player, so I gave them one. The downside is that he now borrows discs all the time," says Jonathan Foulkes of Atlanta, Georgia, a forum member who displays his laserdiscs on a wide-screen TV. "So far, I've convinced three people to buy in the last eight months. The upside of having friends get players is that, as their collections grow, you can borrow from them. Since LD is an optically read medium, there is no 'wear' on the discs themselves, so it's OK to share."

Jan Smith is an associate editor at Ziff Desktop Information in Cambridge, Massachusetts. Her CompuServe User ID Number is 76000,23.

by Patricia Harris & David Lyon

It's All in the Wrist

If work is literally a pain, implement your own 'ergonomics program.'

CompuServe members are a disparate lot, but one thing we have in common is spending too many hours with eyes glued to a monitor and fingers twitching on keyboards and mice. Those long hours can translate into pain in the neck, shoulders, arms, wrists or back.

When Richard K. Turnock of Beaverton, Oregon, developed severe neck and upper-shoulder pain from working at his computer, he called on his company's ergonomics consultant.

"She measures people in their normal position and asks questions about what type of work we do and how we do it," Turnock explains. "She recommends changes and gives advice about posture and position of arms and wrists." Turnock's office now includes a foot rest, a pull-out tray for keyboard and mouse, wrist rests, monitor at the correct height, adjustable chair with armrests and a higher-quality SVGA monitor. He also has a set of exercises to keep his neck and back muscles relaxed and flexible.

Turnock's problems are hardly unique. The National Center for Health Statistics says nearly 19 million workers in the United States suffer from back pain, tendonitis, neck and spine problems, or carpal tunnel syndrome—often attributable to inappropriate office work areas. The American Optometric Association estimates that there are 10 million cases of eyestrain a year among VDT users.

But the burgeoning field of ergonomics helps fit the office to the person. Ergonomics deals with efficiency, but it's also about comfort and all the benefits: better health, greater safety and increased productivity. However, if you can't call the corporate ergonomist, there's assistance on CompuServe.

Glenview, Illinois-based ergonomics consultant Stewart B. Leavitt, Ph.D., has produced educational materials for Mead-Hatcher, a leading maker of computer workstation accessories. (His *Ergonomics in the Office* brochure is available free from Penny Wise Office Products, GO PW, in The Electronic Mall.) He seconds your mother's advice: Sit up straight (but be comfortable).

Leavitt cites some guiding principles for comfortable, efficient work: Fit the furnishings to the individual, adjust the light to minimize glare while illuminating critical work areas, vary the tasks, trim the stress and take a break every hour.

Sound too difficult or expensive? Consider a possible alternative:

A case of carpal tunnel syndrome often costs $15,000 to $20,000 to treat; a severe case can run to $100,000, including worker's compensation and rehabilitation. On the other hand, several studies show that investing in ergonomic furniture raises office productivity 10 percent to 20 percent. That's a swift payback.

PERSONAL ENTERPRISE

Some mistakes are easily corrected. Leavitt points out that most people place their monitors too high, contributing to neck and eye strain. The top of the screen should be slightly below eye level "because people focus better at a slight downward angle. This drives bifocal wearers crazy, which is why they may benefit from computer-specific glasses," he says.

Most desktops are too high for comfortable keyboarding. "The keyboard should rest at elbow level," Leavitt says. "That way your forearms are parallel to the floor." The solution may be a drop-down keyboard tray.

Lights are often too bright. "Employers often think a bright office is a happy office, but it's more likely a glare-filled office," Leavitt says. Dim the overheads and provide task lighting where you need it.

Corporate businesspeople and work-at-homers alike often fall prey to what ergonomics expert and CompuServe member Robert Dobnick calls the "techno-chasm"—using new computers and old furniture.

Dobnick of Chicago, Illinois, and co-

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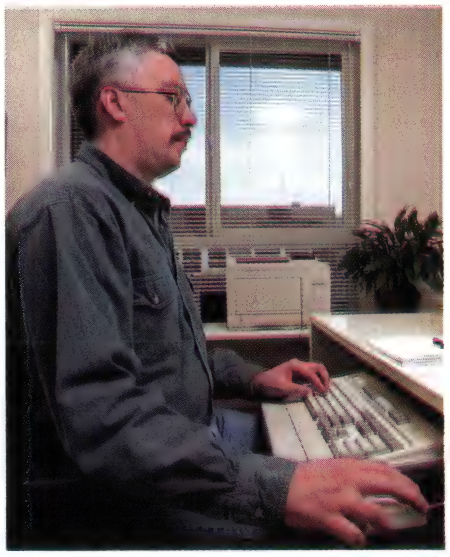
CompuServers' Ideas on Getting Comfortable

Discussions of workstation comfort crop up frequently in forums and some are archived as threads. See CARPAL.THD (35,135 bytes), FURNIT.1 (8,585 bytes) and CHAIR.BG (10,936 bytes) in the Working From Home Forum (GO WORK), Library 14, "Office Hdwr & Sftwr," and CHAIRS.THD (16,869 bytes) in the Computer Consultants' Forum (GO CONSULT), Library 3, "Getting Started." Recent discussions in these forums and others have focused on solutions to common problems. Members have found various fixes to improve their offices' "fit."

"I had a problem with carpal tunnel syndrome until I got an 'under desk' sliding tray to put the keyboard on," says Seattle, Washington, resident Douglas Smith. "It has adjustable elevation, a built-in wrist rest and a slide-out mousepad off the right end. It solved my problem for $30. As an unanticipated benefit, I suddenly found a significant piece of desk space freed up."

A top-notch monitor also helps, especially if you use a graphic interface such as Windows. In Smith's case, that translates to a 17-inch monitor with 1,024-by-768 resolution. He also is a fan of speaker phones "for sitting on hold with the tech-support line."

Member John Gillespie of Lawrenceville, New Jersey, prefers a Plantronics telephone headset: "No more juggling a handset, cramped neck and shoulders, dropping a handset at key moments or annoying speakerphone echoes. For a touch-typist, it's ideal."



DOUG WILSON

Gave carpal tunnel the 'tray' treatment: Smith

More difficult problems may require more extreme solutions. Durant Imboden of Minneapolis, Minnesota, never had problems beyond an occasional stiff neck when pounding out 15,000 words a week on a manual typewriter. In 1982, he switched to a PC and began to develop pain in his left hand from stretching his pinky while using Control key combinations. In mid-1992, disaster struck—he began experiencing severe wrist and hand pain after typing for a few hours. He tried wrist rests and splints and even learned the Dvorak keyboard, on which the right and left hands do equal work and most typing occurs on the home keys where fingers naturally rest. Ultimately, Imboden's solution was a Maltron keyboard, which groups the keys into four dish-like hollows "with the keys arranged so that one's arms come into the keyboard at a natural angle and one's fingers can hit all the keys without uncomfortable stretching." He's a living testimonial: "Today, I can write 10 or 15 hours a day without pain."

Proper seating is another important ergonomic consideration. The quest for a good chair can seem unending. Montreal, Canada, resident Wolf Braun is on his fourth chair in as many years. "I just haven't been able to find a chair that will solve my back problem. I've adjusted the height of my monitor; I've purchased special chairs that tilt forward, backward —you name it. I've planted my feet on rests, at right angles and followed all that good advice. When I have a heavy typing task, the only thing that works is to plan ahead and take sufficient breaks —standing up and stretching."

Adjustability is key, but not even the most adjustable chair fits everyone. Christopher Murray, author of the file CHAIR.BG, points out that chairs differ in the size and angle of the seat pan. Frederic M. Wilf of Media, Pennsylvania, says his law firm went chair shopping and wound up with a different chair for each partner. "All are adjustable for height, and they have other adjustments. They have improved lumbar supports, and all have five legs. We visited the same store, and we each chose different chairs from different manufacturers. It is not enough to simply find an adjustable chair, you have to find an adjustable chair that fits the person sitting in it," says Wilf.

—PH & DL

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proprietor of the Design Conservatory, provides online advice for ergonomic workspace audits. He points out that most problems require individualized solutions, but that lighting affects everyone. First, move the monitor away from and at a right angle to the window. In creating workspace lighting designs, he usually takes one of two approaches: adding diffused light throughout the space and "making the ceiling disappear"—that is, shed light on work surfaces below the monitor and reduce overhead lighting so it won't reflect on the screen. The latter is better for people who work extensively at VDTs, he says.

Industrial product designer Niel Leon of Towson, Maryland, spent some years with the U.S. space program, fitting tight environments to people who had demanding tasks. He faults most offices for lacking varied work surfaces. "Working at the keyboard is different from working on papers at your desk," he says. "Some tasks are better done standing because that posture gives you more flexibility."

Leon concedes that work-at-homers have an edge because they control their office space —installing a computer workstation at one height, a writing desk at another, a drafting table and a lightbox and a conference table in the middle of the room. Home-workers also can use incandescent lights, which some states restrict or prohibit in office buildings.

Patricia Harris and David Lyon are free-lance writers based in Cambridge, Massachusetts. Their CompuServe User ID number is 75300,316.

Read More About It

Numerous articles on various aspects of ergonomics are available in Business and Magazine Database Plus. A sampling:

BUSINESS DATABASE PLUS (GO BUSDB)

"Chair Buys No Longer Seat-of-the-Pants Deal," ***Business First***—Columbus, Aug. 9, 1993. Reference #A14342897.

"Repetitive-Stress Injury Treatments Proliferate," ***The Business Journal***—Phoenix, July 23, 1993. Reference #A14338943.

"Taking the Pain Out of Office Furniture: 'Ergonomic' Products All the Rage," ***Baltimore Business Journal***, June 11, 1993. Reference #A14161222.

"Outfitting Interiors: Suiting Employee Needs Is Fashionable," ***Buildings***, May 1993. Reference #A14123845.

"Key Decisions: Office Technology," ***The Economist***, April 3, 1993. Reference #A13588226.

"Retro Transforms Old Desks into Work Stations," ***Arizona Business Gazette***, Jan. 14, 1993. Reference #A13483289.

MAGAZINE DATABASE PLUS (GO MAGDB)

"Is Your Office a Big Pain?," ***Better Homes and Gardens***, September 1993. Reference #A13242067.

"How to Work More Comfortably," ***Executive Female***, September-October 1993. Reference #A13271289.

"Beating the Office Hazard Blues," ***USA Today*** (Magazine), March 1993. Reference #A13564482.

"The Handling of an Epidemic: Repetitive Stress Injury," ***Working Woman***, February 1993. Reference #A13337329.

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by Holly G. Miller

TOM HOGAN

D-Day Remembered

A generation influenced by the beginning of World War II's end will mark the day online and off.

For almost 50 years, D-Day veteran John Ausland carried a green metal box of memories with him around the world. The box, now in Oslo, Norway, contains letters Ausland wrote to his parents during his four-year army hitch, which began shortly after the attack on Pearl Harbor. He recently blended the memories with two years of extensive research—collected in part on CompuServe—to produce a book, *Letters Home: A War Memoir.*

"I asked my mother to keep the letters because I might want to use them someday," recalls Ausland, a retired diplomat who logs on daily from his home in Norway. "But when the war was over, I wanted to get away from it and plunged into four years of study at Princeton." Then came a career in the foreign service, and Ausland was occupied with a different kind of war—the cold variety—for the next quarter-century. Not until he watched Desert Storm unfold did he feel motivated to write his book. "The thought had never occurred to me," he says. "On the contrary, the last thing I had wanted to do was face all the unpleasant memories in the green metal box that my father gave me in 1945."

Like Ausland, many World War II veterans will face their memories—painful and pleasant—this summer, as the 50th anniversary of D-Day (June 6) touches off a series of commemorations worldwide. Several CompuServe forums are serving as common ground for a generation of war participants, witnesses and survivors to trade news of reunions and share memories of the war that historians call the central event of the 20th century. Among the online gathering places are the Seniors Forum (GO SENIORS), the Military Forum (GO MILITARY) and the Travel Forum (GO TRAVSIG).

"I still remember my Navy serial number, but sometimes I have trouble remembering my own phone number," says David Dorsey, a Seniors Forum member and World War II veteran who served in the Pacific until 1946. Dorsey remembers first hearing reports of the Normandy landing on the Philco table radio at his family's home in Opelika, Alabama. "I woke up my father, and he joined me in my room as the bulletins continued. Then came Eisenhower's announcement. The D-Day invasion had begun. We sat by

Holly G. Miller is travel editor of The Saturday Evening Post *and teaches mass communication at Indiana's Anderson University. Her CompuServe User ID number is 70007,2345.*

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▼
Anniversary of an Ending
▼
Learning MIDI, p. 42
▼
Fun and Funds in Retirement, p. 46

How the Military Forum Is Mobilizing

If Staff Sgt. Jeff Fry has his way, thousands of U.S. towns, schools, civic groups and veterans organizations will qualify as "World War II Commemorative Communities" by Nov. 11, 1995. Among the early recruits to earn the citation is the Military Forum (GO MILITARY).

"It's a carrot-stick kind of thing," explains Fry, assigned to the Department of Defense team helping to mark the 50th anniversary of the war. A group willing to sponsor a commemorative community program and support at least three events a year is presented an official World War II flag, a certificate signed by the secretary of defense, posters, pamphlets and other resources.

Fry checks into the Military Forum daily to offer encouragement, advice, information and materials to users interested in planning or attending anniversary events. "This program isn't intended to serve only the military and veteran community," says Sysop Duane Goodridge. "We want it to serve as an educational tool as well." The need for a crash course in World War II history is underscored by studies that show almost one-third of 17-year-olds in the United States can't name the countries involved in the war; 90 percent of sixth-graders can't identify Stalin, Roosevelt or Churchill from a photograph taken at Yalta; and three out of five Americans have only superficial knowledge of the war that claimed the lives of more than 38 million civilians and almost 15 million soldiers.

"That's what the commemorative community program is all about," says Fry. "The motto is 'A Grateful Nation Remembers,' and we want to get people involved at the grass-roots level."

Goodridge and his forum staff have set aside Message Section 4 and Library 4 for anniversary-related information. Recent files uploaded by Fry list all known World War II commemorative events slated for 1994. They range from D-Day re-enactment landings in Virginia and Chicago to a U.S. Coast Guard flotilla at Poole, England; from a memorial service onboard the *USS George Washington* off the coast of Normandy to a Ranger assault ceremony at Point du Hoc, France; from a joint U.S.-French ceremony on Utah Beach, France, to a D-Day commemoration at the University of Utah, Salt Lake City.

For veterans attending D-Day ceremonies in France, another library file explains how to obtain special identification badges that will ease passage through security checkpoints. Unlike the 40th anniversary of the D-Day invasion, this year's commemoration will focus more on war participants and less on political VIPs.

"Interest and awareness are increasing as we get closer to the Normandy anniversary," Fry says of the government's mission to educate the public. "But we still have a long way to go. Almost 9 million World War II veterans are out there, and each one represents a family. That's a heck of a chunk of people. What better way to honor them than to pass on to younger generations the meaning and scope of their efforts?"

—HGM

the radio all night."

Military Forum and Seniors Forum member Bruce Toor, who logs on from California, was in his fifth-grade classroom when he heard the news of the landing. "Someone produced a map of the Cherbourg peninsula that showed the Normandy beaches. As we listened to the bulletins, we moved colored pins along the line to depict the advancement of the troops," he recalls. In the days immediately following D-Day, Toor continued to poke pins in a map on a cork bulletin board in his bedroom. "Everyone believed this was the beginning of the end for Herr Hitler, so propaganda took a subtle turn toward the humorous," he says, adding that Spike Jones made a recording of a song called "Right in the Fuhrer's Face." "It was only after the war ended that the horrors of the concentration camps became known and the humor disappeared forever."

DAVID SESSIONS

Heard Normandy news in fifth-grade classroom: Toor

Patriotism swept the country, according to Toor, and "there wasn't a breath of dissent or disbelief in the goodness of our purpose." Everyone joined in the effort, regardless of age or location. Seniors Forum member Frieda Pencek was 14 when she volunteered to work as an airplane spotter at a tiny lookout post several miles from her family's home near Richmond, Virginia. "I had to ride my bike—no 10-speed models back then—to and from the site each day," she says. "We learned to identify at least 50 types of planes by silhouette. For three summers, I worked four hours a day calling in plane activity. My 'code' name was Tare."

Orlando Vitullo of Warren, Rhode Island, recalls hearing the news of the Normandy invasion as he was preparing for a different amphibious landing, this one on Saipan in the Marianas Islands. The two invasions, a half-world apart, were linked in a critical way. "Our 'D-Day' was to be the 14th of June 1944," he says. "We knew that the Pacific Theater held a second priority and that what reinforcements we could hope for would now be directed to support the European effort." Although the drama that unfolded in Normandy was of interest to Vitullo and his colleagues, events in the Pacific were of more immediate concern.

In June, special commemorative tours will take vets and families back to Normandy, Saipan and other key battlefields for ceremonies, re-enactments and dedications. If the popularity of the reunion trips is any gauge of interest in the anniversary, the tributes promise to be highly visible. "I live in Mons, Belgium, and I'm frantically trying to find accommodations for that period," says Travel Forum member Janene Millen, who works at Supreme Headquarters Allied Powers Europe, "There are activities celebrating

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RANDOM ACCESS

the anniversary all year, but most of the high-profile events occur from June 4 to 11."

Veterans returning to Normandy for the first time in 50 years are in for some surprises. "For example, in the village where the 82nd Airborne landed, you find that the D-Day invasion has become a cottage industry," says Boston television reporter R. D. Sahl, a Military Forum member and history buff who covered the 40th D-Day anniversary in 1984. There is an invasion museum, a little chapel with a stained-glass window that portrays a paratrooper, and even a street named for a now-retired Boston lawyer (Rue de Robert Murphy) who landed in a woman's garden on June 6, 1944, according to Sahl. "A lot of the villagers remember D-Day and are willing to tell their stories," he says.

To avoid June's crush of visitors, Sahl took his two sons, ages 10 and 14, to Normandy last summer for a history lesson the boys will never forget. "I wanted them to see it with me in the hope I could bring some perspective and meaning to what happened there 50 years ago," says Sahl. "They were especially struck by the enormity, dignity and solemnity of the American cemetery at Omaha Beach."

Historic points of interest such as the cemetery are comforting to some visitors, painful to others. Jacques Chastanet, a member of the Military Forum and resident of Perigueux, France, couldn't eat for several days after he walked the rows of white crosses that mark the graves of American servicemen. "The worst was to go around and look at the names on the graves: Johnson from Chicago, Smith from California," he says. "I tried to imagine all those guys landing on the beaches under fire. I found the price of freedom to be very, very expensive," he says.

John Ausland, who revisited Normandy for the 40th anniversary, will watch this year's ceremonies on television. "Then I'll be able to cry when I feel like it."

Some veterans who choose not to participate in the formal ceremonies will quietly mark the anniversary with buddies who shared the war experience. Fifty years after he flew combat missions over France in a B-26 "Marauder," ex-radio operator and gunner Ralph Wefel, a Military Forum member from Central Point, Oregon, routinely signs his CompuServe messages "WWII USAF Vet." An avid historian, he hopes the military designation will catch the eye of other online Ninth Air Force veterans who like to swap memories as much as he does. He also enjoys filling in the blanks for baby boomers intent on learning more about the war that they barely missed. "I hope young people realize the tremendous sacrifices made not only by those who gave their lives but also by those who left their wives, children, jobs and college to make sure we won that war," he says.

This summer's commemoration should help elevate D-Day to its proper place in history. At the time the D-Day operation occurred, even the 155,000 Allied soldiers who took part didn't realize its importance.

"I don't think when we were landing that we thought in terms of participating in a historic event," says Ausland. "General Bradley spoke to the officers of the assault divisions several weeks before the landing. When he said, 'You will have a front-row seat on the greatest amphibious operation in history,' there was at first silence, then a wave of laughter swept over the room. He looked puzzled. He was a career officer, and he probably couldn't understand that we civilian-soldiers lacked his enthusiasm."

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by John Edwards

MARTIN STUDIO

Keying up for MIDI experience: Jim and Eva Marie Mannoia

Your First MIDI Steps

Everyone from musicians to sound card fans can try the technology.

"Had I learned to fiddle, I should have done nothing else," quipped 18th-century English writer Samuel Johnson. If the term "MIDI" had been in Dr. Johnson's famous dictionary, he might have felt the same way about computer music.

MIDI stands for Musical Instrument Digital Interface, a technology that can turn almost any humble desktop computer into a mighty music-making machine. MIDI itself isn't a product, but rather a communications protocol that allows music lovers to interconnect computers, music keyboards, guitars, drum machines and a wide range of other devices featuring a MIDI-compatible interface. For CompuServe members just getting started in the field, the MIDI/Music Forum (GO MIDIFORUM) is a place to go for seasoned advice.

RANDOM ACCESS

The forum has message sections and libraries devoted to users of IBM, Macintosh, Amiga and Atari ST computers. It also covers the complete range of MIDI hardware and software, supplies "canned" music files, and helps members overcome creative and technical problems. In addition, three MIDI vendor forums provide direct support from many of the MIDI industry's leading hardware manufacturers and software publishers (see "Overview of Support Forums," p. 44).

MIDI/Music Forum Manager Jim Maki observes that many people are drawn to the forum after exploring their computer's built-in sound capabilities or adding a plug-in sound card. "Most members are interested in learning how to play songs downloaded from the forum libraries and to compose their own songs using a MIDI keyboard or computer."

Anthony Selby, a forum member from Baltimore, Maryland, sought help on how to access, download and dump patch files of orchestral sounds into his synthesizer. Members directed him to the forum's libraries, where he obtained a conversion program and a program that allows him to send or receive system-exclusive messages to his Ensoniq SQ2 synthesizer. "They helped me one step at a time. If another obstacle comes up, I'm confident I'll get help with that, too," he says.

Most budding MIDI users are brimming with questions, and the forum's resident experts do their best to supply concise, accurate answers. "Our experienced staff and members provide support on all major computer platforms and on topics ranging from getting a sound card installed and running to setting up a full home or commercial recording studio."

MIDI beginner Jim Mannoia of Houghton, New York, checked into the forum seeking information for another MIDI novice, his 14-year-old daughter. Mannoia planned to

The Basics: MIDI Forum Files

Learning the basics of MIDI technology is as easy as downloading a few relevant files from the MIDI/Music Forum's (GO MIDIFORUM) Library 2, "Basics & Product Guide":

What Does MIDI Do?—A captured message thread in which forum members discuss issues often raised by MIDI novices. NUMIDI.TXT (10,239 bytes).

General Description—The general MIDI specification, including an instrument patch map and a percussion key map. GENMID.TXT (12,713 bytes).

MIDI Glossary—Terms used in MIDI music and computing. GLOS21.ZIP (16,500 bytes).

IBM Interfaces—The types of MIDI interfaces available to owners of IBM PC-compatible computers. INTERF.ACE (11,819 bytes).

IBM Programs—List of sequencers and notation programs available for IBM PC-compatible computers. IBMSW.TXT (4,909 bytes).

MIDI Windows for Beginners—Handbook on MIDI technology for Windows users. MIDWIN.ZIP (45,814 bytes).

Macintosh Programs—List of sequencers and notation programs available for Apple Macintosh computers. MACSW.TXT (2,286 bytes).

Mac MIDI Events and Interfaces Description—Details of Macintosh MIDI technology. MACIF.TXT (7,575 bytes).

Atari Programs—List of sequencers and notation programs available to Atari ST computers. STSW.TXT (2,265 bytes).

How'm I Doin'? Listen to the TAPE

So you've assembled your MIDI system, practiced computer music with all your heart and soul and produced your very first masterpiece. Now it's time for the *big* question: Is your music any good? The TAPE Project in the MIDI/Music Forum (GO MIDIFORUM) can help you find the answer.

TAPE (Tape Artists' Public Exchange) is a cooperative online project started in late 1992 by New York attorney and MIDI/Music Forum Associate Sysop Dominick J. Fontana. It's designed to help forum members evaluate the technical, production and musical elements of their pieces in a friendly, noncompetitive atmosphere.

The project's working structure is simple: Members submit their original recordings on cassette for review by fellow TAPE participants, including both professional and advanced amateur MIDI musicians. Each recording receives a thorough evaluation and critique by each reviewer through messages placed in the forum's message section and in a monthly live conference. A member can sign up for TAPE as a submitter, reviewer or both. There's no fee for participation in TAPE beyond the regular CompuServe connect-time charges.

TAPE is open to users at all levels of MIDI and music expertise. "It doesn't matter if you have great equipment or top-notch recording skills, you can still benefit from TAPE by having the reviews focus on your songwriting and performance skills," Fontana says.

Jim Lynch, who has served as a TAPE submitter and reviewer, says it's useful to get various reactions from other members. "It makes you think about your work and the way others perceive it."

Project submitters dabble in a wide range of musical styles —classical, pop, New Age, jazz and some modes that are hard to label. "It's whatever people feel like doing," Lynch says.

Lynch's advice to MIDI newcomers: "Give TAPE a try. You'll never know how good you are—or can be—unless you're willing to put your work out in front of others."

For more details, check out TAPE's guidelines in the file TAPEGD.TXT in Library 17, "TAPE Project Files," of the MIDI/Music Forum.

—JE

give her a keyboard for Christmas and wanted to make sure the one he bought could connect to a MIDI interface, allowing her to print her original compositions on the computer.

Members recommended keyboards in his price range, either a Yamaha PSR 310 or 410, and explained that the keyboard must have at least two parts to ensure a MIDI connection (for recording and playback of MIDI files). With less than 24-hours to spare before his last-minute Christmas shopping trip, Mannoia had gathered enough information from forum members to confidently make his purchase. "My daughter cried when she got the keyboard," he says. "She was thrilled. What more could a father hope for?"

The forum is also a storehouse for MIDI software programs. Many programmer-members have uploaded shareware and freeware products to the forum's libraries, providing enhanced software for using MIDI technology and sound cards. "Our members have said that our generic MIDI driver, FMSYN, is better than the drivers supplied by the sound-card manufacturers or the driver that comes with Windows," says Maki. (FMSYN is available in the forum's Library 15, "Sound Card Files," in the file FMSYN.ZIP.)

For most members, acquiring computer music skills is a gradual, step-by-step process. "MIDI concepts and lingo can be very intimidating," admits forum member Ron Legro of Milwaukee, Wisconsin, who recently added MIDI capabilities to his Commodore Amiga. "I'm still getting it all figured out, especially the way channels and instruments are interrelated. But I've learned enough here to begin making actual music on computer-linked MIDI devices."

One of the concepts Legro quickly learned is that hooking a keyboard into a computer's MIDI port is simply the first step in creating computer music. Like many other MIDI enthusiasts, he has equipped his machine with speakers, a sequencer (a program that allows users to record, play back and edit music) and an array of other hardware and software products.

"Amigas don't come with MIDI ports installed," notes Legro. "As with most other computers, you need an external MIDI interface." For about $100, Legro purchased Oregon Research's AMAS (Advanced MIDI Amiga Sampler), a combination audio digitizer and MIDI input/output interface that comes with its own audio software. (The company recently introduced AMAS 2, which

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QUICK & REILLY	77	128	171	171	41	46	61
PCFN	80	140	160	160	40	44	53
SCHWAB	100	166	221	221	41	46	61
FIDELITY	102	166	221	221	38	43	61
MERRILL LYNCH	162	457	682	761	65	81	144

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Overview of MIDI Support Forums

Following are forums that offer MIDI support:

Amiga Arts Forum (GO AMIGAARTS)—Section 7, "Music and MIDI," and Library 7, "Audio/MIDI Utilities."

Atari ST Arts Forum (GO ATARIARTS)—Section and Library 5, "Music/MIDI."

IBM New Users Forum (GO IBMNEW)—Section 4, "Music," is for discussion of DOS MIDI issues; Library 4, "Music," contains MIDI and sound files.

Mac Entertainment Forum (GO MACFUN)—Section 7, "Mac'ing Music MIDI," is for discussion of using MIDI with Macintosh and Library 6, "Sound Utilities," contains sound playing and converting utilities.

MIDI A Vendor Forum (GO MIDIAVEN)—Vendors including Turtle Beach, Opcode, E-mu, YC/Kurzweil, Twelve Tone, Big Noise and others provide support for their products here.

MIDI B Vendor Forum (GO MIDIBVEN)—Offers product support by Cool Shoes Software, Mackie Designs, Sweetwater Sound, Media Vision, Musitek, Coda Music Tech., Lexicon and other vendors.

MIDI C Vendor Forum (GO MIDICVEN)—Vendors include Roland, Howling Dog, Blue Ribbon, MediaTech Innovations, Dr. T's, Asystem, Thoughtprocessors, Soundcraft, Innovative Quality Software.

MIDI/Music Forum (GO MIDIFORUM)—Supports MIDI interface, synthesizers, MIDI sound modules and sound cards. Libraries contain sampled sounds and members' compositions, drivers, patches, sound-card files.

Sight and Sound Forum (GO SSFORUM)—For discussion of all aspects of visual and audio equipment, including Section 5, "MIDI," and Library 5, "MIDI Song Library." Libraries include song sequences, wave files, drivers and sound cards.

KING ASSOCIATES

provides a more sophisticated sequencer and several other new features.)

For software, Legro uses SuperJAM! from Blue Ribbon Softworks (MIDI C Vendor Forum, GO MIDICVEN). "It can write music in literally dozens of styles based on the parameters you set up," he says. "You can play along or let the whole thing happen on a fully automated basis."

But while elaborate systems can be fun, a computer user can easily explore MIDI on a limited budget. "Most PC users require only a computer, a sound card such as Sound Blaster or Pro Audio Spectrum, and a pair of speakers to begin enjoying the many MIDI and digital-sound files in the MIDI Forum," Maki says, adding that with the addition of an inexpensive microphone, members can digitally record their own sounds and music simply by using the software that comes with their plug-in cards. "Many members upload digital recordings they have made themselves," he says.

Forum member Glenn Workman of Columbia, Maryland, uses his Macintosh-based MIDI system for film scoring, commercials, industrial films, live performances and "general time killing." He notes that a Mac user can get started in MIDI for a few hundred dollars (not including the cost of the computer). He says a basic Mac-based MIDI system includes the computer, a MIDI-compatible keyboard or other instrument priced at $200 and up, a simple interface with serial cable costing about $45, a pair of inexpensive MIDI cables and one of the many Macintosh sequencing programs selling in the $100 range.

While all computer brands and most sequencer programs can play any file in the standard MIDI format, a number of sequencing programs use their own proprietary format when they construct a MIDI file. "This music can be played back only on that particular sequencer if you own both the sequencing program and the brand of computer that the file was created on," says forum regular Myles Cohen of New York City. "But if you turn it into a MIDI file, then it is universally playable and usable on all computer platforms—Atari, Macintosh, MS-DOS and so on—and can be loaded into any modern sequencing program."

RANDOM ACCESS

Bob Ashforth, a software consultant and computer musician in Deerfield, New Hampshire, says MIDI technology can be approached at two levels: functional and serious. "Many inexperienced users can have a great time with MIDI by simply treating it as the way you connect one musical device to another," he says. "More serious users, such as those who wish to record MIDI pieces, adjust or insert controller values, shift note times or adjust note lengths, need to understand things in a bit more depth." The MIDI/Music Forum's libraries contain an extensive selection of introductory and advanced-level tutorial files (see "The Basics," p. 42, for a list of some of these files).

"My advice for getting started in MIDI is to realize that it's not just for keyboard players," says Dominick J. Fontana, a New York City-based attorney who moonlights evenings and weekends at Studio di Fontana, his own MIDI music studio. (Fontana also supervises the MIDI/Music Forum's TAPE Project; see "How'm I Doin'?" p. 43). A guitar player first and a keyboard player second, Fontana uses synthesizers, samplers and drum machines to create a rhythm section that emulates drums, bass guitar, organ, and sometimes brass and strings. Then he records lead guitars, rhythm guitars and vocals directly to tape or to hard disk.

With the extensive array of MIDI add-ons now on the market, including keyboards, drums, guitars and even wind instruments, computer music has come a long way from the thumping "music synthesizers" of the 1970s. "MIDI can be used very effectively to simulate the rhythm section of a rock band," says Fontana, who plays mostly blues, rock and R&B.

Forum member Frank Coleman of Needham Heights, Massachusetts, says MIDI makes it both easier and more difficult to create good music. "It's easier in that you have the ultimate scratch pad available to you," he observes. "It's more difficult in that great production comes in a can now and the onus is on the author, who had best have something to say." Coleman's advice: "It doesn't matter how you do it, it matters that you do it and that you do it from your gut."

John Edwards studied pre-digital electronic music at Hofstra University (GO OLT-130).

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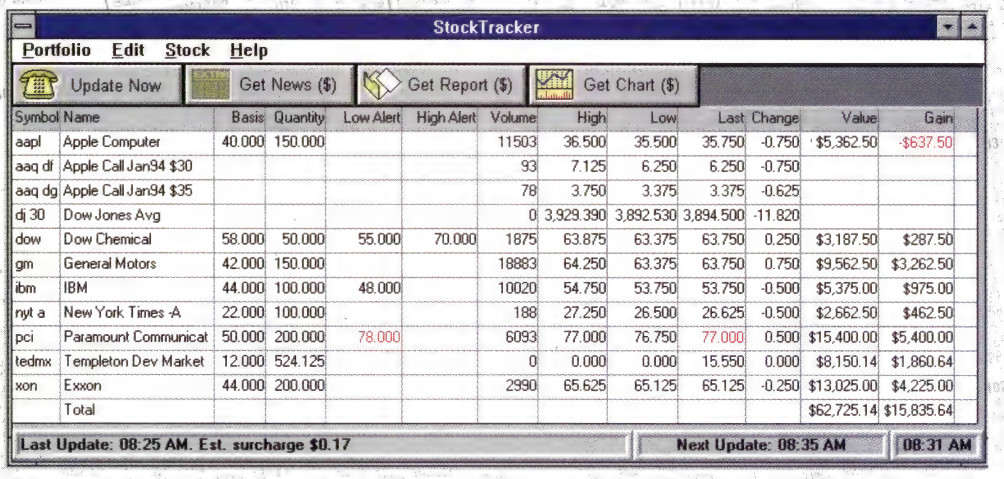

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aaq dg	Apple Call Jan94 $35					78	3.750	3.375	3.375	-0.625		
dj 30	Dow Jones Avg					0	3,929.390	3,892.530	3,894.500	-11.820		
dow	Dow Chemical	58.000	50.000	55.000	70.000	1875	63.875	63.375	63.750	0.250	$3,187.50	$287.50
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ibm	IBM	44.000	100.000	48.000		10020	54.750	53.750	53.750	-0.500	$5,375.00	$975.00
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pci	Paramount Communicat	50.000	200.000	78.000		6093	77.000	76.750	77.000	0.500	$15,400.00	$5,400.00
tedmx	Templeton Dev Market	12.000	524.125			0	0.000	0.000	15.550	0.000	$8,150.14	$1,860.64
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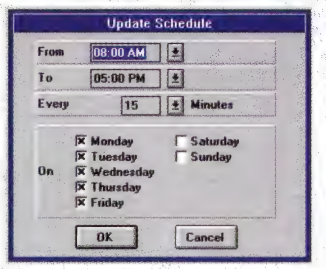

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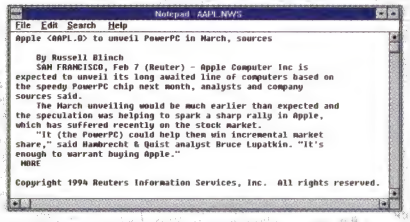

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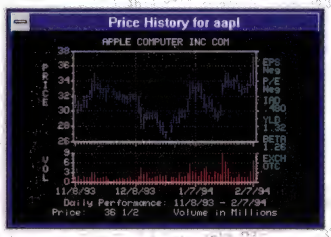

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by Cathryn Conroy

DAVID KAMPFNER

Bellframe work spices up retirement: Trotman

The *Other* Retirement Plan

You'll need money to spend, but you'll also need some things to do.

Chances are you've heard it before, you'll hear it again, and you'll still ignore it: It's never too soon to save for retirement. But while socking away enough cash for a comfortable retirement is essential, it is not the only thought people should give to their later years. As we live longer, healthier lives and as companies encourage or force early retirement, many retirees have learned a lesson for all of us: Money is important, but it isn't everything.

Bob H. Bussard, a 60-year-old computer systems analyst for a major oil company in Houston, Texas, has a clear vision: He wants to retire at 62 and move to Mexico. In anticipation of heading for the border, he and his wife are taking Spanish lessons and have used their vacation time for the last five years visiting potential retirement areas. Online visits to the Foreign Language Forum help Bussard hone his new Spanish skills, and the Travel Forum is a source for information on Mexico.

Bill White of rural Fountaintown, Indiana, recently retired at age 56 as a research chemist from Eli Lilly. He and his wife hope to sell their home and move to a house they have purchased in Prescott, Arizona. A longtime fascination with the desert Southwest and several years of research went into their decision to relocate. After visiting 49 states, Canada and Mexico scouting potential retirement sites, the Whites chose Arizona because it would allow them to pursue favorite pastimes, such as hiking, boating, fishing and exploring nature. "We looked to a new territory for our next big adventure," says White, a member of the Seniors Forum.

RANDOM ACCESS

Not all retirees are content with lazy days and that means planning ahead for outside interests to be pursued. Frank C. Presson, who planned to retire early long before corporations hit on the idea as a way to save money, dreamed of exotic vacations around the world. An executive with Xerox Corp. in Herndon, Virginia, Presson retired in his early 50s only to discover that he loves to work. Occasionally glancing at the obituaries, he was stunned by the number of people who died soon after retirement. Boredom could kill, he concluded. So Presson the retiree has become Presson the entrepreneur, running a home-based financial consulting business.

"The old saw of 'one must retire *to* something rather than *from* something' began to have significance," he says. "One must have something to do to be successful at retirement."

After taking several trips immediately upon retirement, Presson attended financial planning seminars. He soon realized he knew as much or more than the instructors and hit on the idea of becoming a certified financial planner. After 18 hours of college courses and a two-day certification examination, Presson Financial Associates was born.

"If you have reasonably good health, working through age 80 is quite possible," says Presson. "Staying idle too long can be responsible for premature mental and physical aging." Even if they aren't interested in starting a business, Presson urges retirees to develop outside interests. This can begin before retirement through hobbies and community work.

Peter Trotman of Melbourne, Derby in the United Kingdom, retired early from IBM Corp. and capitalized on his lifelong interest in English-style church bellringing, better known as "change ringing." Working in teams, change ringers ring, in succession and in strict rhythm, large church bells suspended by ropes attached to wheels. Trotman, a member of the U.K. Forum, now works part-time for Eayre & Smith, a small bellhanging company, installing, maintaining and restoring bellframes and fittings in bell towers around England.

Financial and Life Planning: Retirement-Related Files

To learn more about retirement planning, consult the Seniors Forum (GO SENIORS), Investors' Forum (GO INVFORUM) and Magazine Database Plus (GO MAGDB). All articles listed below are from Magazine Database Plus and are available in full-text.

FILLING YOUR DAYS

Employment and Volunteer Opportunities—Resources for employment and volunteer opportunities for senior citizens. Seniors Forum, Library 2, "Social Security" EMPLOY.TXT (2,910 bytes).

"Part-time Jobs Boost Retirement Benefits," *Financial World,* Sept. 14, 1993. Reference #A14360043.

"Retirement: Enjoying Life in the Fast Lane," *USA Today,* May 1993. Reference #A13807602.

RELOCATING

Leave questions on particular locations worldwide in the Travel Forum (GO TRAVSIG), as well as the Florida Forum (GO FLORIDA) and California Forum (GO CALFORUM). Search Magazine Database Plus using as your keyword the city or state for which you want information.

FINANCIAL PLANNING INFORMATION

Reverse Mortgages—Questions and answers on how to get cash from your home without selling it. Seniors Forum, Library 13, "Housing," RVMOR1.TXT (9,168 bytes).

Social Security Update—Public information from the Social Security Administration on Social Security, SSI and Medicare. Seniors Forum, Library 2, SS1993.TXT (7,644 bytes).

Keoghs and SEPs—Retirement planning for the self-employed, including alternative, tax-free savings plans. Investors' Forum, Library 7, "Fin'l Plan./Taxes," KEOGH.THD (9,210 bytes), RETPLN.THD (27,680 bytes), SELF-E.THD (2,246 bytes).

"Beat the Five Threats to Your Retirement," *Money,* November 1993. Reference #A14548759.

"Your Best 401(k) Moves Now," *Working Woman,* November 1993. Reference #A14266155.

"How You Can Afford to Retire Well," *Fortune,* July 26, 1993. Reference #A14037544.

"A Revolution in Retirement Planning," *U.S. News & World Report,* June 14, 1993. Reference #A13840198.

FINANCIAL PLANNING SOFTWARE

The Feeling's Mutual 2.0.92—Mutual fund database and financial planner. Shareware, $25 to $60. Investors' Forum, Library 5, "Mutual Funds," TFM92.EXE (243,200 bytes).

Investment Withdrawal Program—Retirement planning tool calculates effect of taxes, yield and inflation on investment funds and monthly withdrawals. Shareware, $10. Investors' Forum, Library 7, "Fin'l Plan./Taxes," SAVNGS.EXE (60,126 bytes).

Financial Analysis for Windows 3.40—Program to analyze financial instruments for retirement planning. Requires Windows 3.1. Shareware. Investors' Forum, Library 7, WINFIN.ZIP (399,413 bytes).

Pre-retirement and Retirement Financial Planner—Evaluates financial profile of an individual during pre-retirement or retirement years, projecting year-by-year status of net worth. Shareware, $39.95. Investors' Forum, Library 7, FWORTH.EXE (151,372 bytes).

"The work is usually done with local assistance, providing insights into the lives and histories of people and places I would otherwise have had no reason to visit," he says, adding that the job provides the structure and social support system he enjoyed while working for IBM.

John Schmidt, a college instructor in North McLean, Queensland in Australia, recently retired from the classroom and is working toward fulfilling a dream of building and operating a tourist retreat. He admits that he has taken the "conservative option" for most of his career, but retirement will be different. The resort will be built at the mouth of the Endeavour River in Cooktown in North Queensland on a high steep slope under a thick forest.

There are challenges aplenty and risks to match. "It takes courage to spend all that money in what some see as a risky venture. I would sooner work for myself, however unsuccessfully, than do something that was different but perhaps not as good for me," says Schmidt.

A longer, healthier life span means we have the potential for two totally different lives—one spent working and one spent retired. Whether the second, retired life involves pursuing a hobby or basking in the Mexico sun, financial planning is needed to make the desire a reality.

"Plan for your 'second life' just as well, if not better, than you plan for your 'first life'," says White. "I believe retirement planning should begin as early in one's career as possible. The better you plan, the better your retirement will be."

Bussard has been on the career fast track at several companies over his working life, which will result in less than adequate pension payments. He long ago realized he would have to take responsibility for funding his own retirement to Mexico, so he actively invested in the stock market.

You should start seriously saving for retirement by age 35, but most people don't feel the pressure until 40, says Bob J. Bollinger, a certified financial planner and president of Bollinger Financial Advisory Inc. in Stillwater, Oklahoma. If you don't start saving soon enough, it's hard to catch up.

Bollinger offers this quiz as evidence: At a 10 percent return, who will have more money at age 60? John saves $2,000 annually beginning at age 35, contributing $50,000 to his nest egg. Meanwhile, Mary is too busy remodeling her home and buying computer equipment to begin saving for retirement until she is 50. In a panic, she saves $10,000 a year for 10 years, contributing $100,000. Who has more? Thanks to the power of investing, John has 24 percent more than Mary. "To take advantage of long-term compounding, getting an early start is important," advises Bollinger, a member of the Investors' Forum.

The biggest mistake in financial planning is underestimating inflation. Likening it to a monster, Bollinger says, "Inflation can surface during retirement—after it's too late to change a plan—and chew you up bite by bite." While retirement income sources don't all rise with inflation, medical costs, property taxes and utilities do go up.

Presson began financially planning for his retirement when he was in his mid-30s. He did some crude figuring to determine how much money he and his wife would need to retire early and travel. The magic number became a benchmark, and one that he realized 17 years later. Besides being a disciplined saver, the main reason he reached the goal was that he planned for it.

In addition to saving and investing, White advises others to buy as large a home as possible to take full advantage at retirement of any rise in real estate prices. If you have an idea of a retirement locale, White encourages you to buy land now. "Property prices in good areas rise fast. Even if you change your plans before retirement, the investment will have helped your money supply," he says. No matter how well you have planned your retirement, stay flexible. "Leave room for change. Never be rigid, and keep an open mind," advises White. "Live for the future, and don't bring your past along."

Cathryn Conroy is senior writer of CompuServe Magazine. *Her CompuServe User ID number is 70007,417.*

Downloadable Notables

Downloadable Notables is a monthly catalog of new and interesting uploads from various forums researched and compiled by Associate Editor Chris Galvin. If you'd like to suggest a file for mention, send the full forum file description (including file name, size, title, keywords and summary) along with a brief note explaining why it caught your fancy to CompuServe User ID 71154,74. *Do not send the file itself.* Note: Many mentioned program files are shareware; view full descriptions online for details. File names are listed in ALL CAPS. If you cannot locate a file, check the forum's announcements for late changes or post a message to *SYSOP.

* * * * *

CD-ROM Arrivals—Owners of drives that read the ubiquitous shiny discs should visit the CD-ROM Forum (GO CDROM) for the latest product announcements and utilities. Library 2, "Titles & New Prods," and Library 9, "Industry Issues," feature uploads from the folks at *CD-ROM Professional Magazine*, which contain the text from their "New Titles" and "News" departments.

Search files in format *.CDP (file size varies).

Library 4, "DOS, Windows, OS/2," includes an IBM PC CD-ROM benchmark that provides detailed info about the performance of your drive; and CD Player for Windows, a popular compact disc playing and cataloging program with all the functions of a home unit plus an oscilloscope and waveform analyzer, disc and track scroll bars, and list boxes for tracks and memory.

CDB_10.ZIP (128,623 bytes);
CDPLAY.ZIP (76,193 bytes).

Library 6, "Stand-Alone Pltfrms," has a text file covering professional CD-i titles, projects and corporate uses, such as training, education and marketing applications such as kiosks.

CDIPRO.TXT (31,014 bytes).

Are You 'Doomed'?—Causing a great big buzz and thousands of downloads in the Gamers Forum (GO GAMERS) is *Doom* from Id Software, a lightning-fast and very engrossing IBM PC virtual reality game that pits your skills as a marine against legions of grisly fiends. Library 7, "Action/Arcade Games," contains the game as well as a number of utilities and help files others have written for it, including a Frequently Asked Questions file, a saved-game editor, and a compilation of several files holding all discovered codes and cheats such as "God mode."

DOOM.ZIP (2,213,985 bytes);
DOOMFQ.ZIP (39,632 bytes);
DSGEDI.ZIP (35,841 bytes);
DOOMCH.ZIP (8,887 bytes).

Help Around the House—Are you a fix-it-yourself homeowner? The new *Family Handyman* Forum (GO HANDYMAN), brought to you by the magazine of the same name, is a great source for ideas and info on maintenance, remodeling, woodwork, plumbing, tools and more. Library 2, "Home Repairs," features articles on cures for 12 common house ailments such as squeaky floors and broken countertops and the eight least expensive ways to conserve energy.

HMREPR.TXT (18,048 bytes);
ENERGY.TXT (11,201 bytes).

Library 4, "Remodeling," has text describing how to remove a wall to open up a living space, and how to turn your medieval dungeon of a basement into a pleasant sanctuary.

REWALL.TXT (12,065 bytes);
BSMENT.TXT (29,737 bytes).

Library 7, "Decks & Patios," includes a guide to buying and using deck cleaners and reviving chemicals.

DECKCL.TXT (6,259 bytes).

Library 8, "Elect. & Plumbing," has clues to solving two of the most annoying home problems: clogged drains and drip-drip-dripping faucets.

DRAIN.TXT (2,378 bytes);
FAUCET.TXT (7,833 bytes).

PC Application Station—Stop by the IBM Applications Forum (GO IBMAPP) for the latest in DOS-based programs for business, educational and personal purposes. Library 7, "Gen. Apps," is a fun browse full

This Month's FILE CLUSTER

Welcome to the modemic medley that is the File Cluster, uploads from various forums, each searchable by the same keyword. This month: This kind of Boom makes a noise the *zeitgeist* always hears; a grand one cuts the sweetest chord and its ga-ga talk endears: BABY.

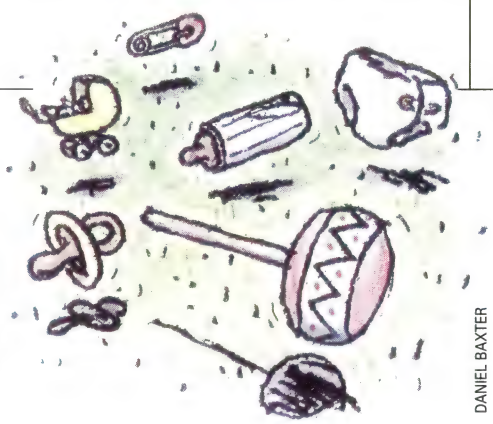
Baby Alligator on Board—CarSign is an IBM PC program that makes those annoying diamond-shape stick-ons you still see in the rear windows of cars. Tell the world what's on your mind every day. Hooks up with Epson, IBM Proprinter and HP Thinkjet printers, perhaps others. Automobile Forum (GO CARS), in Library 2, "Resources/Software," CARSIG.ZIP (27,053 bytes).

P-P-P-Please, Eddie!—A GIF image of Disney's Roger Rabbit and Baby Herman, with Roger realizing that a refrigerator is about to drop on his head. Comics/Animation Forum (GO COMICS), Library 14, "Comic Art GIF Files," RR0001.GIF (65,190 bytes).

Food for Baby—A recipe for "crumbless" teething biscuits. Mmmmmm. Cooks Online Forum (GO COOKS), Library 9, "Breads," TEETHC.TXT (821 bytes).

Helping Out—Information on contributing to a project knitting/crocheting squares for afghans for children with AIDS in the New Jersey area. Crafts Forum (GO CRAFTS), Library 2, "Knitting & Crochet," AIDBAB.TXT (971 bytes).

Baby Affected?—A selection of abstracts from Medline about how gestational diabetes can affect the unborn and newborn child of a diabetic mother. Diabetes Forum (GO DIABETES), Library 12, "Pregnancy & Sex," GDMBBY.BIB (17,554 bytes).



DANIEL BAXTER

Dinosaur Icons—Windows clickable illustrations of Barney (can you stand it?) and Baby Bop. Dinosaur Forum (GO DINOFORUM), Library 3, "Graphics/Artists," BARNEY.ZIP (775 bytes).

Electronic Baby Book—This Macintosh baby book includes text files, a family tree, graphic representations of milestones in a baby's life and more in a HyperCard stack. Shareware. Genealogy Forum (GO ROOTS), Library 4, "Apple Software," BABY.SEA (88,704 bytes).

Whale of a GIF—Two humpback whales, cow and calf, diving in Alaska's Kenai Fjords National Park. Graphics Corner Forum (GO CORNER), Library 6, "Animal Kingdom," FLUKES.GIF (157,584 bytes).

Pregnancy Calculator—Enter a date of conception and this program for the IBM PC shows a time line of events in fetal development and updates you in successive program runs. Health and Fitness Forum (GO GOODHEALTH), Library 6, "The Doctor's Inn," BABCAL.ZIP (52,431 bytes).

Teats for Tots—A copy of the first issues of *Latching On*, a newsletter covering the subject of breastfeeding, with 25 advantages of the nonbottle feeding method. Holistic Health Forum (GO HOLISTIC), Library 12, "Birth & Childcare," BREAST.TXT (11,028 bytes).

of interesting uploads. Recent additions include the Contact Lens! PIM, with unlimited categories, 22 search fields and context-sensitive help; the powerful BIBL professional/home office library manager; Your Birthday Almanac, which makes a commercial-quality printout of what happened on a specific birth date; the MicroCook recipe database, with far-reaching file import, search and print capabilities; and a shareware file containing approved living will forms for every U.S. state in which they are legal, uploaded by an author of a book on the subject.

CL.ZIP (409,617 bytes);
BIBL.ZIP (281,109 bytes);
BORN26.ZIP (318,560 bytes);
MCOK13.ZIP (242,594 bytes);
LIVEWI.ZIP (17,073 bytes).

Mac Enhancements—The Macintosh Systems Forum (GO MACSYS) provides one-stop shopping for files that make your Mac more useful. Library 3, "Inits/Extensions," now features Symbionts, which displays beneath startup icons the number of bytes each extension allocates from the system heap, and three patches that help speed up various aspects of the AV Macs.

SYMBIO.SIT (70,272 bytes);
AVPTCH.SIT (12,288 bytes).

Library 4, "Control Panels," includes Default Folder, which creates default folders for applications and pop-up navigation menus in dialog boxes, and PrintChoice, which adds an Apple Menu selection to let you switch between different printers and fax modems without a trip to the Finder.

DEFFLD.CPT (102,784 bytes);
PRINTC.SEA (36,992 bytes).

Library 7, "Utilities," has Check32!, a program that checks applications for 32-bit cleanliness, and Time Palette, a very cool and configurable world-time display with Mercator day/night earth map (best in color).

CHK32.SIT (37,120 bytes);
TPLT20.SEA (227,072 bytes).

For the Kids—A reminder that the Missing Children Forum (GO MISSING) is now open—and a part of basic services—with images and text files from the National Center for Missing and Exploited Children (NCMEC) from regions of the United States. The forum includes other files related to preventive safety: Library 1, "Forum Information," has remarks by President Clinton on the Child Protection Act, a fact sheet on the CPA, and information about the NCMEC.

CHLACT.TXT (4,539 bytes);
CHILD.TXT (2,209 bytes);
CNCMEC.TXT (19396 bytes).

Library 10, "Child Safety," includes "My Eight Rules for Safety," a helpful NCMEC flyer with things every child should know.

RULES8.TXT (3,756 bytes).

Multimedia GIFs—What are they? Visit the Sight and Sound Forum (GO SSFORUM) to learn about this neat new means of creating presentations: GIF files with multiple images, MIDI soundtracks and Wave PCM (sound effect) data. Library 10, "Sight and Sound GIFs," includes the Windows 3.1 Multimedia GIF player (check requirements); a DOS-based scripting program that creates the musical GIF files for the player; two files containing a tutorial with example GIF and the digital parts used to create the example; and GIF files others have already made, such as artist Jacqui Kinnie's electronic storybook, *Someday I Wish ...* .

MMGIF.ZIP (241,548 bytes);
EMBED.ZIP (37,416 bytes);
TUTOR.ZIP (217,754 bytes) and MGIF.ZIP (204,313 bytes);
WISHIN.GIF (394,074 bytes).

Space Pix—Thanks to the dramatic repair by the Endeavor shuttle crew last December, the Hubble Space Telescope is working much better. If you want to "see for yourself," go no further than the Space Forum (GO SPACEFORUM), which holds the latest GIF images from the telescope in its Library 17, "Recent Uploads." After a stay there, files are moved to Library 14, "Deep Sky Astro GIFs," such as the beautifully sharp color image of the spiral galaxy M100, the first received after the repairs were completed (search file names in the WFPC*.GIF format for more images showing Hubble's improvement).

M100.GIF (142,319 bytes).

And Baby Makes Three—A 1992 online conference that discussed what happens to your relationship with your significant other upon returning home with your first bundle of joy. Human Sexuality Open Forum (GO HSX100), Library 2, "Family Crisis," BABY.CO (21,171 bytes).

Tons o' Baby Names—Download the biggest list of baby names in electronic form, more than 12,000 names, sorted alphabetically and by length. It's a free demo of a much larger database called MobyWords. PC version: IBM Applications Forum (GO IBMAPP), Library 7, "Gen. Apps," BABY.ARC (94,208 bytes). Mac version: Macintosh Applications Forum (GO MACAP), Library 2, "Word Processing," BABY (92,416 bytes).

Adoption Book—A news release about the 1991 book *How the Adoption Establishment Works and How to Make It Work for You*, based on Arty Elgart's experiences founding the Golden Cradle Adoption Agency. Issues Forum (GO ISSUES), Library 6, "Parent Connection," GCBOOK.NR (4,563 bytes).

BabySmash—This Mac program keeps your baby from accidentally dragging files to the trash by displaying random shapes and playing sounds when the child pounds the keyboard or mouse. Macintosh Systems Forum (GO MACSYS), Library 7, "Utilities," BABSMA.SIT (278,144 bytes).

Sniff, Sniff, Woof—Tips for preparing the family dog for a new baby's presence, making the introduction and preventing and correcting behavioral problems. Pets/Animals Forum (GO PETS), Library 3, "Dog Library," BABY.TXT (9,470 bytes).

Mom's Kiss—A perfect GIF for Mother's Day and a prize-winning image by Sysop Mike Wilmer: a tight close-up of a mom lifting her baby and kissing her on the cheek. Photography Forum (GO PHOTOFORUM), Library 6, "GIF/People/Kids," MOMKIS.GIF (208,886 bytes).

Waaaah!—WAV-format sound of a baby crying. Sight and Sound Forum (GO SSFORUM), Library 4, "Sound Clips," BABY.ZIP (199,407 bytes).

PC Play—Danny's First Program is a delightful, colorful DOS program with a keyboard piano and 26 different pastimes, each keyed to a letter of the alphabet. Graphics, music and other diversions teach youngsters computer interaction without driving parents nuts. Students Forum (GO STUFO), Library 2, "Grade/Middle School," DANNY.ZIP (79,164 bytes).

Feeding Frenzy—*Crying Baby Brats* is a Windows arcade game pitting you (armed with a milk bottle) against a nursery full of screaming infants. You must keep as many of them fed and temporarily happy as possible. Students Forum, Library 17, "Student Lounge," BRATS.ZIP (87,059 bytes).

TV Star 'Child'—Windows format wallpaper bitmap of the Baby character from the former ABC-TV sitcom *Dinosaurs*. Windows Fun Forum (GO WINFUN), Library 9, "Bitmaps/Graphics," BBDINO.ZIP (187,392 bytes).

Baby Clip Art—In PCX format, these images include babies in all sorts of settings: looking at a mirror, nursing, crawling, dressed as a bunny, even arriving with the stork. WordPerfect Users Forum (GO WPUSERS), Library 16, "Present'ns/Graphics," BABY1.ZIP (164,197 bytes) and BABY2.ZIP (311,852 bytes).

Sitter Info—Baby Sitter is an IBM PC management program that lets a sitter pop up info on numbers to call, things to do on a schedule (with reminding alarms) and more. Zenith Forum (GO ZENITH), Library 6, "DOS Applications," SITTER.ZIP (59,478 bytes).

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Following are summaries of book reviews available for reading this month in *Online Today*. To read the complete reviews, use the GO commands listed at the end of each summary.

Big Blues: The Unmaking of IBM

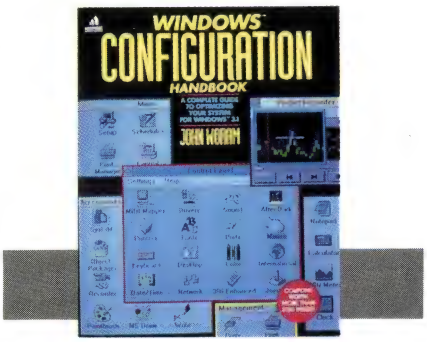
By Paul Carroll
Crown Publishers Inc., 1993
375 pages, $24 (hardcover)

Written by the *Wall Street Journal* reporter who covered IBM Corp. for seven years, this fascinating study of how a revered corporate culture contributed to the demise of one of the United States' greatest companies is as good a read as any novel, says reviewer James Moran. *GO OLT-5210*

Navigating the Internet

By Mark Gibbs and Richard Smith
SAMS Publishing, 1993
500 pages, $24.95 (softcover)

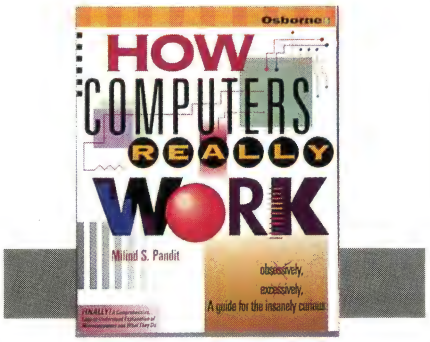
Using a nautical theme to discuss traveling across what most of the world calls "the information highway," this book isn't for Internet landlubbers, says reviewer Richard A. Danca. It offers detailed instructions on using Internet's many features, including LISTSERV and telnet. *GO OLT-5220*



Windows Configuration Handbook: A Complete Guide for Optimizing your System for Windows 3.1

By John Woram
Random House, 1993
1,122 pages, $34 (softcover)

There are so many features tucked behind Microsoft Windows' icons and menus that the program seems to have taken on a life of its own. Reviewer Harry Green advises Windows users who want to get the most out of the program to put the manual away and read this book instead. *GO OLT-5230*



How Computers Really Work: A Guide for the Insanely Curious

By Milind S. Pandit
Osborne/McGraw-Hill, 1993
381 pages, $21.95 (softcover)

This book tries to teach readers who have never picked up a scientific calculator or a pocket saver the ins and outs of computer technology beginning with a chapter on electricity and moving on to such topics as memory and modems, says reviewer John Edwards. *GO OLT-5240*

The Virtual Community

By Howard Rheingold
Addison-Wesley Publishing Co., 1993
325 pages, $22.95 (hardcover)

This landmark study of computer networking with its decidedly counter-culture sensibility offers a view of computers as community-building tools. Reviewer Paul A. Gilster says this is a compulsive read for anyone interested in using computers to communicate with others around the world. *GO OLT-5250*

Macintosh Multimedia Workshop

By Michael D. Murie
Hayden Books, 1993
350 pages, $39.95 (softcover with CD-ROM disk)

Filled with tools and tips for developing multimedia projects, this well-written text is an ideal book for multimedia beginners, says reviewer Anthony Watkins. *GO OLT-5270*

Bookkeeping On Your Home-Based PC

By Linda Stern
Windcrest/McGraw-Hill, 1993
256 pages, $14.95 (softcover)

This easy-to-read tutorial covers all aspects of independent bookkeeping launched from a home-based computer. As part of an entrepreneurial series edited by Working From Home Forum Sysops Paul and Sarah Edwards, it is a valuable primer for those interested in bookkeeping, says reviewer Sharon Kahn. *GO OLT-5280*

GUIDE TO SHOPPING ON THE COMPUSERVE INFORMATION SERVICE

THE ELECTRONIC M·A·L·L®

APRIL 1994

Remember Mom May 8th With a Gift From The Mall!

Shop The Mall's Spring Gift Guide, See Page 5

Play Slam Dunk and Win an Autographed Team Basketball, See Page 7

FREE SHOPPING 24 HOURS A DAY, 365 DAYS A YEAR

Dear Mall Shopper:

Spring has arrived at The Mall! In this month's guide, you'll find terrific gift ideas for Mom on her special day. And, in the Spring Gift Guide (GO SGG), you can place your order directly online. Great gift ideas for Father's Day, graduations and weddings, too. Shopping has never been easier! See page 5.

There's still time to give the Slam Dunk Contest your best shot. If basketball's your game, you could win one of dozens of prizes — including the Grand Prize, a Championship Team Basketball ($799 value), compliments of Hammacher Schlemmer (GO HS). See page 7.

This month, we welcome five new stores to The Mall. The Iams Company (GO IAMS), The Escort Store (GO CMW), Exec/Direct (GO PWM), Epic MegaGames (GO EP) and Rock Video Monthly (GO ROCKVID). You can shop them all — and any Mall store — connect-free, 24 hours a day.

See you online!

Keith Arnold

Keith Arnold
Electronic Mall Manager

Pamper Mom with English Lavender.

Each bath product in this lavish English Lavender gift basket contains pure essential oil of English Lavender distilled by the Caley Mill of England from the flowers they grow. Prized through the ages, English Lavender is a delightful gift, sure to make Mom feel special.

BRETON HARBOR BASKETS AND GIFTS. GO BH
ENGLISH LAVENDER BATH BASKET $90

Give Mom a book she'll love.

Make her day with a book for the '90s from HarperCollins Online. Choose from the *Festive Occasions Cookbook* from the Williams-Sonoma Entertaining Series ($27), *Meditations for Women Who Do Too Much* by Anne Wilson Schaef ($18) and *Ageless Beauty The Natural Way* ($14). See our complete selection online. Request a **free** catalog.

HARPER COLLINS ONLINE. GO HAR

Give her a rose that will last forever.

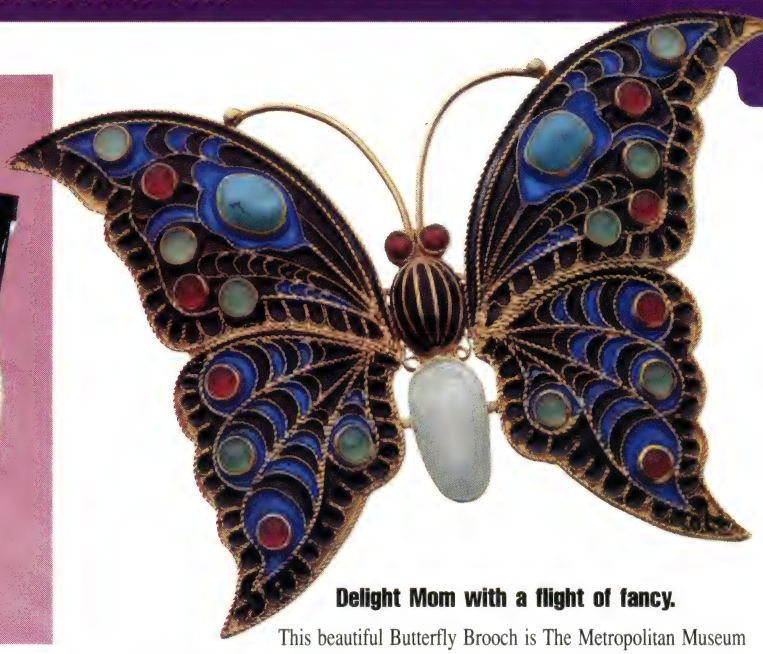
This beautiful Capodimonte porcelain rose is superbly detailed with all the delicacy of the real thing! Comes with a felt mat to make an exquisite display piece. Choose red or yellow rose. Blossom measures 3½″ W x 2¼″ H. Beautifully gift-boxed.

THE GIFT SENDER. GO GS
CAPODIMONTE PORCELAIN ROSE $35

Indulge her with this gourmet Mother's Day Basket.

This charming wicker basket is filled with goodies she'll love — a delicious Effie Marie Rum Butter Cake, Yellow Star Thistle Honey, Gourmet Honey Apricot Spread, Mango Tea, plus a bright red, heart-adorned "Mom" Coffee Mug filled with two 2-oz. packages of Gourmet Coffee.

COFFEE ANYONE ??? GO COF
MOTHER'S DAY BASKET ONLY $38.95



Delight Mom with a flight of fancy.

This beautiful Butterfly Brooch is The Metropolitan Museum of Art's handmade adaptation of an opulent Russian brooch from the late 19th century. Sterling silver electroplated with gold. Set with turquoise, aventurine and carnelian stones, decorated with enamels.

THE METROPOLITAN MUSEUM OF ART. GO MMA
BUTTERFLY BROOCH $98

Save $67 on carefree cooking with nonstick Calphalon.

Nothing cooks like this exclusive triple-coated nonstick heavy-gauge Calphalon cookware set. Features stay-cool stainless steel handles and tempered glass lids. Includes 8″ and 10″ omelet pans; 5-qt., 12″ saute; and 1½ qt. covered sauce pan. 100% satisfaction guaranteed.

THE CHEF'S CATALOG. GO CC
CALPHALON COOKWARE SET
REGULAR PRICE $307
SALE PRICE $239.99

Tell Mom she's "a peach" with long-stemmed roses.

Honor her with the best — one dozen long-stemmed roses — delivered direct from the grower. These Sonia peach roses are carefully packed in a styrofoam gift box, then rushed by Federal Express courier to brighten her week. Shipping included. Order by April 30 and get a $10 crystal vase **free**!

FLOWER STOP. GO FS
ONE DOZEN LONG-STEMMED ROSES $49.95

Send her caviar on Mother of Pearl!

When only the best will do, send this luxurious gift package to say she's precious. Includes 3 oz. of fabulous Russian Osetra caviar, 5″ Mother-of-Pearl plate and spoon, and a 2¾-oz. package of mini toasts. Gift-wrapped. Price includes two-day air shipping in the U.S.

ADVENTURES IN FOOD. GO AIF
MOTHER OF PEARL GIFT BOX $85

Brighten her day with this Strawberry Basket Bouquet.

Strawberry vines wind around this ceramic basket filled with a traditional selection of red roses, mini carnations and white chrysanthemums (shown). Or, send a creatively untraditional arrangement of roses, a rubrum lily and an african violet.

WALTER KNOLL FLORIST. GO WK
STRAWBERRY BASKET BOUQUET
TRADITIONAL $49.95
UNTRADITIONAL $54.95

Enjoy the ultimate taste in coffee with the Krups Automatic Drip Set.

Here's the easiest way to get fresh-roasted, fresh-ground and fresh-brewed coffee — the complete Automatic Drip Set. It includes a Krups "Fast-Touch" grinder, a Krups 10-cup Brewmaster Plus automatic drip brewer, a permanent 24-carat, gold-plated filter, and two 12-oz. ceramic mugs.

GREEN MOUNTAIN COFFEE ROASTERS. GO GMR

KRUPS AUTOMATIC DRIP SET $67.95

Give the gift of music with the Sony® Walkman.

Digital tuner and Mega Bass® sound system give you incredible sound! Also includes scan, five AM/FM pre-sets, clock and alarm. Anti-rolling mechanism reduces sound distortion when you're moving.

JCPENNEY. GO JCP
SONY WALKMAN ONLY $69.99

Pamper her with a genuine Turkish Cotton Bathrobe.

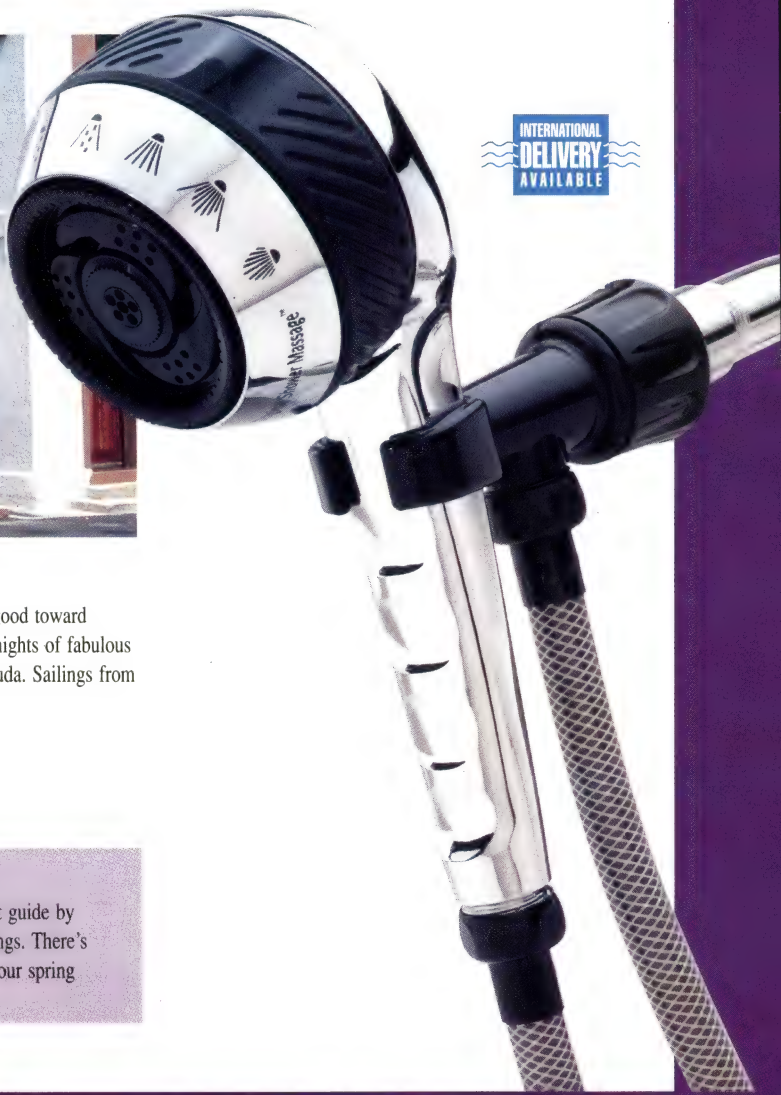
Wrap your special someone in the luxury of 100% Turkish cotton. Legendary for their extraordinary thickness and absorbency, our Turkish Cotton Robes absorb water faster, helping to conserve body heat. Shawl collar, self belt. Machine washable. S, M, L or XL.

HAMMACHER SCHLEMMER. GO HS
TURKISH COTTON BATHROBE $99.95

Feel refreshed with the Shower Massage™ — *and* save $10!

Ease away the day's stress with the Shower Massage. Choose from eight different shower selections, plus hand-held or stationary convenience. Water and energy saver. One-year warranty. Easy installation, hose and bracket included. International delivery.

HEALTH AND VITAMIN EXPRESS. GO RX
SHOWER MASSAGE BY TELEDYNE
LIST PRICE $69.95
OUR PRICE $59.99



Cruise to Bermuda and enjoy a $100 shipboard credit!

Live it up on the glamorous *Royal Caribbean* and enjoy an exclusive $100 shipboard credit good toward shopping, wine, spa services and more ($100 per cabin, based on double occupancy). Seven nights of fabulous fun, food and entertainment. Round-trip from New York to St. George's and Hamilton, Bermuda. Sailings from May – October. Request a **free** brochure online. Rates vary by departure date.

COMPU-CRUISE BY ROSENBLUTH VACATIONS. GO CRUISE
BERMUDA SHOPPING CRUISE FROM $749

Shop The Mall's Spring Gift Guide for great gift ideas!

The Electronic Mall makes your spring gift-giving a breeze. You can shop The Mall's gift guide by category to find terrific gift ideas for Mother's Day, Father's Day, graduations and weddings. There's also a special Graphics Showcase featuring GIF images of the gift selections. So, make your spring shopping easier than ever — browse the gift guide and place your order! GO SGG

Shape up your wardrobe with this Contrasting Collar Pinpoint Oxford Cotton Shirt from Paul Fredrick.

This elegant new shirt from Paul Fredrick features a contrasting varsity spread collar in button or french cuffs. In blue or blue-striped body of luxurious 100% Imported Pinpoint Oxford Cotton.

PAUL FREDRICK SHIRT COMPANY. GO PFS
CONTRASTING COLLAR SHIRT $37.50 TO $39.50

INTERNATIONAL DELIVERY AVAILABLE

Save $140 on this Fisher 24-Disc CD Player from Shoppers Advantage!

Enjoy hours of your favorite music with the Fisher Studio 24 CD Management System. Features include 24-disc vertical format, search/playback with seven preset categories, 31 programmable categories, fluorescent display and remote. One-year warranty. Model #DAC 2403. Ordering also available for non-members.

SHOPPERS ADVANTAGE CLUB. GO SAC
FISHER STUDIO 24 CD PLAYER
LIST PRICE $399
MEMBER'S LOW PRICE $259

Enjoy the easy comfort of chino pants from Lands' End.

Pair these classics with a sweater or blouse for easy-going style. Or, for a casual look, team them with a T-shirt. Always comfortable, they're made of 100% prewashed cotton for broken-in softness. Many colors and sizes. International delivery.

LANDS' END. GO LANDS
MEN'S OR WOMEN'S CHINOS
PLAIN OR PLEATED $32

INTERNATIONAL DELIVERY AVAILABLE

Delight her on Mother's Day with the luxury of precious pearls.

These genuine freshwater pearls are sure to put a smile on Mom's face. Choose 8″ bracelet and 20″ necklace set featuring a stunning five-strand design that's appropriate for any occasion. Pearl-drop pierced earrings (sold separately) are accented with gold-filled beads.

800-FLOWERS AND 800-GIFTHOUSE. GO FGH
PEARL NECKLACE/BRACELET SET $49.99
PEARL-DROP EARRINGS $19.99

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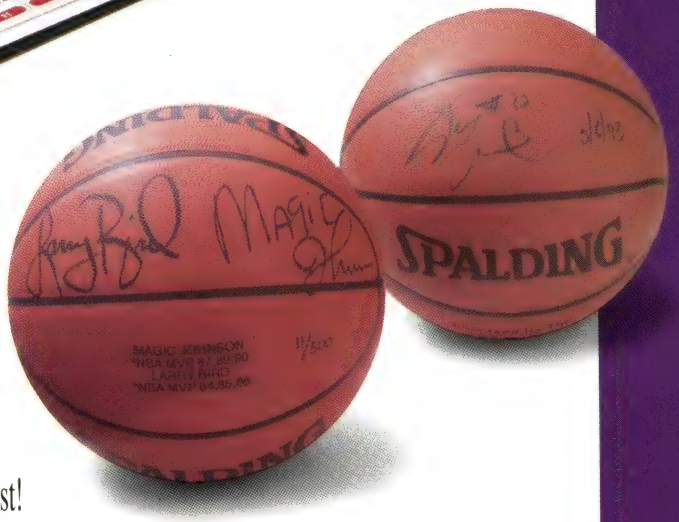
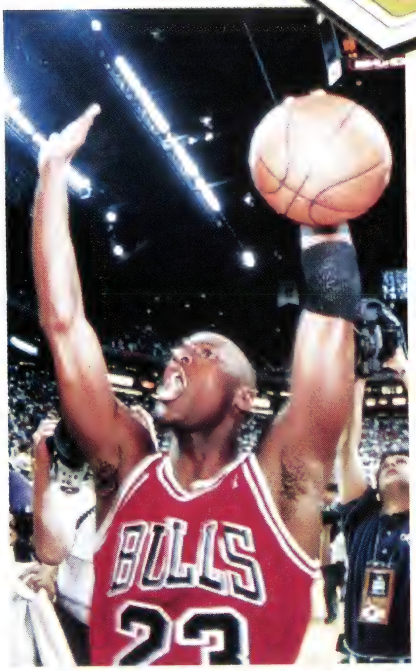
SLAM DUNK CONTEST





WALTER IOOSS, JR.

Play The Mall's Slam Dunk Basketball Contest!

Go one-on-one to win exciting prizes in The Mall's Slam Dunk Basketball Contest! Each week through April 26, 1994, you'll have a chance to score points answering multiple-choice basketball questions. Answer the questions correctly and you'll be entered in a drawing for great prizes.

The Grand Prize — A Championship Team Autographed Basketball, retail value $799! Compliments of Hammacher Schlemmer (GO HS). The winner can choose from the 1986 Boston Celtics, 1988 Los Angeles Lakers, or Larry Bird and Magic Johnson (retail value $499 for individual players). Plus other great weekly prizes like the NBAopoly game pictured, retail value $19, from Sunglasses, Shavers & More, SO SUN. Take your best shots! GO SLAMDUNK

Get the CompuServe Visa® Card — There's No Annual Fee *and* You Get a $27.50 Connect-Time Credit!

There's no annual fee — *ever*, with the CompuServe Visa card. Just apply by June 1 and use your card six times in the first year. As a new cardholder, you'll get a welcome bonus — a $27.50 connect-time credit! Plus, you get a low variable APR, special discounts and coupons, and much more. Choose a Classic card or Gold card. Apply online now. U.S. residents only.

COMPUSERVE VISA STORE. GO CARD

MALL REFERENCE

A wide world of shopping at your fingertips.

Shopping has never been easier. The Electronic Mall puts over 120 stores at your fingertips. You can shop free 24 hours a day, 365 days a year, for a wide array of products, information and services. Use the handy directory on these two pages for a complete listing by category of Mall stores and their GO commands. Then GO MALL to shop online or to find worldwide shipping information, payment options, a detailed product index, a directory of print catalogs, and the latest Mall news, events and contests. GO MALL

THE ELECTRONIC M·A·L·L®

No matter which pricing plan you have on CompuServe, shopping The Electronic Mall is connect-free, 24 hours a day, 365 days a year.

APPAREL/DEPARTMENT STORES

CATALOG INFO ONLINE

AC	Americana Clothing
AU	Austad's ●
BR	Brooks Brothers
JCP	JCPenney ■
LANDS	Lands' End
LEGGS	L'Eggs Hanes Bali Playtex ●
PG	Patagonia ●
PFS	Paul Fredrick Shirt Company
SAC	Shoppers Advantage Club ●

ARTS/MUSIC/VIDEO

▼ BCCM	BBC Magazine
CD	BMG Compact Disc Club ●
BOT	Books on Tape ●
BEM	Bose Express Music
▼ CVA	Colonel Video & Audio
FREECD	Columbia House ●
CCV	Critics' Choice Video ●
JR	Justice Records
LE	The Laser's Edge
MMA	The Metropolitan Museum of Art
NP	Narada Productions
▼ COUNTR	New Country Music Magazine
▼ ROCKVI	Rock Video Monthly

AUTO/BOAT/RV

AI	Automobile Information Center
AQ	AutoQuot-R
ATV	AutoVantage Online ●
▼ CMW	The Escort Store
FORD	Ford Electronic Showroom ■
FMC	Ford Motor Company ■
LM	Lincoln-Mercury Electronic Showroom ■
PON	Pontiac Showroom ●

BOOKS/PERIODICALS

BOMC	Book-Of-The-Month Clubs ●
BOT	Books On Tape ●
BH	Breton Harbor Baskets and Gifts
CBK	CompuBooks
ORDER	CompuServe Store ★
DB	Data Based Advisor
ENT	Entrepreneur Group ●
▼ FCB	Forture Book Club ●
HAR	HarperCollins Online ●
HCB	History Book Club ●
JR	Justice Records
LOS	Library of Science Book Club ●
MMP	Macmillan Publishing Company ●
MC	MacUser
MSP	Microsoft Press ■
MH	McGraw-Hill On-Line Bookstore
NN	NewsNet ■
ND	Nicholas Direct
PCC	PC/Computing
PM	PC Magazine
PCB	PC Publications
PRC	PRC Database Publishing
PPP	Peachpit Press
QPB	Quality Paperback Book Club ●
BK	Small Computer Book Club ●
▼ USM	U.S.News & World Report
JW	Wiley Pro-Shop ●
WS	Windows Sources

CLUBS/MEMBERSHIPS

ATV	AutoVantage Online ●
CD	BMG Compact Disc Club ●
BOMC	Book-Of-The-Month Clubs ●
BEM	Bose Express Music
CCB	Children's Book-Of-The-Month Club ●
FREECD	Columbia House ●
CARD	CompuServe Visa Store ●
FFS	Florida Fruit Shippers ★
FCB	Fortune Book Club ●
LOS	Library of Science Book Club ●
QPB	Quality Paperback Book Club ●
SAC	Shoppers Advantage Club ●
BK	Small Computer Book Club ●

PAYMENT INFO ONLINE

COMPUTER HARDWARE/ SUPPLIES

DP	AT&T Online Store ■
CTR	CitiTronics Memory ●
CBK	CompuBooks
CE	Computer Express
CS	Computer Shopper
CA	Concord Direct
DA	Dalco Computer Electronics
DD	Digital's PC Store ●
DM	Direct Micro
▼ PWM	Exec/Direct
HTH	The Heath Company
IL	IBMLink
JDR	JDR Microdevices
MMP	Macmillan Publishing Company ●
MC	MacUser
MW	MacWarehouse
MZ	Mac Zone/PC Zone
MH	The McGraw-Hill On-line Bookstore
MCS	Mission Control Software
MCW	MicroWarehouse
PA	Parsons Technology
PCA	PC Catalog ●
PCC	PC/Computing
PM	PC Magazine
PCB	PC Publications
PRC	PRC Database Publishing
SR	Sears ●
BK	Small Computer Book Club ●
WS	Windows Sources

COMPUTER SOFTWARE

BB	Broderbund
CF	CheckFree Corporation ●
ORDER	CompuServe Store ★
CE	Computer Express
CS	Computer Shopper
DB	Data Based Advisor
DD	Digital's PC Store ●
▼ EP	Epic MegaGames
▼ PWM	Exec/Direct
FORD	Ford Electronic Showroom ■
IBMPSP	IBM Personal Software Products ●
JDR	JDR Microdevices
MW	MacWarehouse
MZ	Mac Zone/PC Zone
MCS	Mission Control Software
MCW	MicroWarehouse
PA	Parsons Technology
PCA	PC Catalog ●
SAF	Safeware Computer Insurance
SD	Shareware Depot ■
SI	Sierra Online

CATALOG INFO ONLINE

GIFTS/FLOWERS/ GOURMET FOODS

FGH	800-Flowers & 800-Gifthouse
AIF	Adventures in Food ★
AK	Alaska Peddler
BH	Breton Harbor Baskets and Gifts
BR	Brooks Brothers
CC	The Chef's Catalog ●
COF	Coffee Anyone ???
EX	Executive Stamper ■
FG	Figi's Gifts ●
FFS	Florida Fruit Shippers ★
FS	Flower Stop ●
GW	Garrett Wade Woodworking
GS	The Gift Sender
GIM	Gimmee Jimmy's Cookies
GMR	Green Mountain Coffee Roasters ●
HS	Hammacher Schlemmer
HAM	Honey Baked Ham ●
LANDS	Lands' End
LE	The Laser's Edge
MMA	The Metropolitan Museum of Art
OS	Omaha Steaks ●
PFS	Paul Fredrick Shirt Company
SUN	Sunglasses, Shavers & More
VA	Virginia Diner
WK	Walter Knoll Florist

HOBBIES/TOYS/PETS

GW	Garrett Wade Woodworking
▼ IAMS	The Iams Company

INVESTMENTS/FINANCE/ REAL ESTATE

INC	Business Incorporating Guide
CF	Checkfree Corporation ●
CORP	The Company Corporation
CARD	CompuServe Visa Store ●
CIC	Continental Insurancenter ●
DR	Dreyfus Corporation ●
ENT	Entrepreneur Group ●
HRB	H&R Block ●
HF	HomeFinder by AMS ■
TKR	Max Ule Discount Brokerage ★
NN	NewsNet ■
RELO	Relocation Network ●
SAF	Safeware Computer Insurance
SD	Shareware Depot ■
CRE	TRW Credentials ●
TC	Twentieth Century Mutual Funds
UP	University of Phoenix ●
JW	Wiley Pro-Shop ●

MERCHANDISE/ ELECTRONICS

WORLDWIDE SHIPPING

CC	The Chef's Catalog
▼ CVA	Colonel Video & Audio
CA	Concord Direct ★
CFD	Crutchfield Electronics ●
BEDS	Dial-A-Matress ●
▼ CMW	The Escort Store
FMC	Ford Motor Company ■
HS	Hammacher Schlemmer
HTH	The Heath Company
JCP	JCPenney ■
PWP	Penny Wise Custom Print Shop ●
SR	Sears ●
SUN	Sunglasses, Shavers and More
ZBEST	Z Best Electronics & Appliance

OFFICE SUPPLIES/ BUSINESS SERVICES

INC	Business Incorporating Guide
CORP	The Company Corporation
CARD	CompuServe Visa Store ●
DM	Direct Micro
DR	Dreyfus Corporation ●
EX	Executive Stamper ■
HRB	H&R Block ●
TTS	H&R Block Tax Training School ●
HF	HomeFinder by AMS ■
TKR	Max Ule Discount Brokerage ★
ND	Nicholas Direct
PWP	Penny Wise Custom Print Shop ●
PW	Penny Wise Office Products ●
RELO	Relocation Network ●
SR	Sears ●
TC	Twentieth Century Mutual Funds
▼ USM	U.S.News & World Report

SPORTS/FITNESS/HEALTH

AC	Americana Clothing
AU	Austad's ●
CL	Contact Lens Supply ■
RX	Health and Vitamin Express
▼ SDV	SDV Vitamins ★

TRAVEL/VACATIONS

AF	Air France ■
▼ ASU	Airline Services Unlimited
AK	Alaska Peddler
CRUISE	Compu-Cruise by Rosenbluth ●

GO MALL

On CompuServe's Electronic Mall

HOW TO SHOP:

When you see a product you would like to purchase, if prompted, type **"O"** to order. Otherwise, simply select the item from the menu. Continue shopping, or complete the order by typing **"CHECKOUT."** An electronic order form will appear and you will be prompted for all pertinent information such as size, color, delivery method and credit card billing. To cancel your order at any time, type **"EXIT."** Before your order is sent to the Mall merchant, you will have the opportunity to verify that your order is correct and to make any necessary changes. Once your order is complete, a CompuServe order number will be given.

SHIPPING:

Shopping in most stores in The Electronic Mall is available to CompuServe members around the world. Certain postal, national and trade laws prevent certain Electronic Mall merchants from being able to ship their goods to all areas. The following guide will help you with your store selection:

● U.S. Only
■ U.S. and Canada
★ Please go online for details
All other merchants ship worldwide.

▼ The Electronic Mall is pleased to welcome our newest merchants!

Join The Electronic Mall Elite and Get a $2.50 Connect-Time Credit!

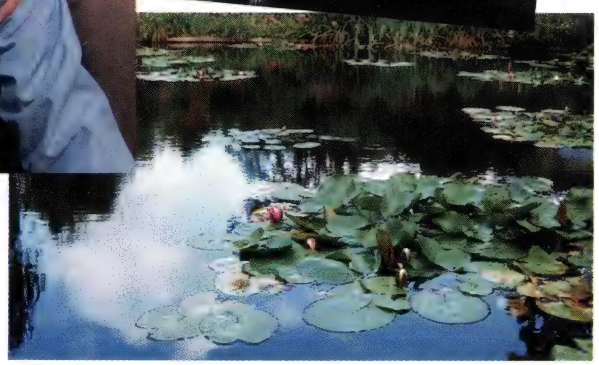
As a member of The Electronic Mall Elite, you'll receive monthly bonus offers, exclusive special discounts, advance notice of contests and promotions, and much more. Each month you'll receive an electronic Elite newsletter to keep you posted on what's happening. There are no fees for joining *and* we'll reward you with a $2.50 CompuServe usage credit! To become an Elite member, simply complete the online Elite survey.

ELECTRONIC MALL ELITE. GO ELITE

Congratulations to The Mall's "YOUR NUMBER'S UP!" Contest Winner!

As the Grand Prize winner in The Mall's "Your Number's Up!" contest last fall, Scott Hollomon and his wife Kathy of Acton, Mass., won the trip of a lifetime. The Grand Prize package, compliments of Air France (GO AF), included two Le Club Business Class tickets to Paris, France; overnight accommodations for two for six nights in a three-star Paris hotel; Continental breakfast daily and two Air France garment bags! And, 100 other CompuServe members won prizes from Electronic Mall merchants in the contest. So, watch for the next "Your Number's Up!" contest coming this September!

TONY RINALDO



Consult Special Events & Contests for Late-Breaking News

There's always something new and exciting happening online on CompuServe. The Special Events and Contests Area keeps you up-to-date on the latest events — and it's connect-free to all members! You'll find late-breaking news of contests and games, online guest appearances and conferences, special sales and bonus offers, connect-time credits, and much more.

SPECIAL EVENTS AND CONTESTS. GO SPECIALS

THE COMPUSERVE COMMITMENT TO ELECTRONIC SHOPPING

▼ ▼ ▼

As a CompuServe shopper, you are on the leading edge, shopping today the way the rest of the world will shop in years to come — electronically! We are continually striving to expand our roster of stores to provide you with the best products, services and information available. We welcome your comments and suggestions.

GO MALLMANAGER

■

SHOPPERS GUIDE

Save 40% on Ray-Ban and Serengeti sunglasses during April!

Ray-Ban's rugged looking Outdoorsman features browbar, cable temples and neutral gray lenses to cut glare. Stylish unisex Serengeti Wickets feature high-tech lenses that automatically lighten and darken, even behind a car windshield. Request our **free** catalog online.

SUNGLASSES, SHAVERS & MORE. GO SUN
RAY-BAN OUTDOORSMAN SUNGLASSES
RETAIL PRICE $107.80
APRIL SALE PRICE $64.70
SERENGETI WICKETS SUNGLASSES
RETAIL PRICE $150
APRIL SALE PRICE $90

Save $70 on RCA Cordless Stereo Headphones from Z-Best.

Get freedom and privacy to listen to your program without disturbing others! And, no tangled cords. Advanced technology provides high-quality stereo sound. Includes quick-access tuning, volume control and adjustable ear cups. International delivery.

Z-BEST ELECTRONICS AND APPLIANCE. GO ZBEST
RCA CORDLESS STEREO HEADPHONES
RETAIL PRICE $199
SALE PRICE $129

Save $14 on this "timely" gift.

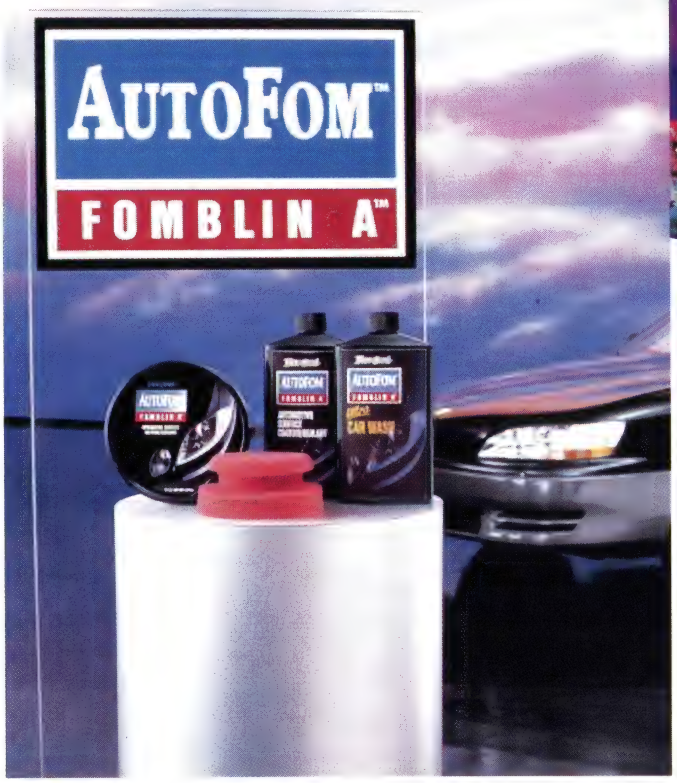
This Seth Thomas hardwood wall clock makes a perfect gift. Features gold-tone bezel, protective lens and step second hand. Accurate quartz movement runs on one AA battery (not included). 13″ diameter. Color: cherry. Stock #GTM-2659.

PENNY WISE OFFICE PRODUCTS. GO PW
SETH THOMAS WALL CLOCK
LIST PRICE $53
SALE PRICE $38.95

Get a *free* music video with *Rock Video Monthly*!

Order *Rock Video Monthly* and get ten hot new music videos every month for only $2.98! Choose your favorite category — pop, country, rap, alternative or heavy metal. And your first *Rock Video Monthly* cassette is **free**! No obligation. Satisfaction guaranteed. Details online.

ROCK VIDEO MONTHLY. GO ROCKVID



Spruce up your car with the AutoFom™ Car Care Kit.

AutoFom Auto Coating and Sealant from Blue Coral is the only car care product containing Fomblin A™ — a space-age chemical that repels dust and dirt! In paste or liquid, the kit includes a two-year supply plus four more AutoFom products.

SEARS SHOP AT HOME. GO SR
AUTOFOM CAR CARE KIT $29.99

GIFT BONUS

Get a *free* solar calculator with a TRW Credentials membership.

TRW Credentials℠ Service, a unique information service created by TRW, operator of the nation's leading credit reporting bureau, helps you maintain vigilance over your credit status for only $44 a year. Enroll in TRW Credentials Service online and receive a **free** solar calculator.

TRW CREDENTIALS. GO CRE
ONE-YEAR MEMBERSHIP $44
INCLUDES *FREE* SOLAR CALCULATOR

Get more out of *Microsoft Windows*™ and get FREE software!

Get *Windows Sources*™ and learn how to tap into the power of *Windows*. Bright, bold, hard-hitting, *Windows Sources* is filled with in-depth product reviews, time-saving tips, test reports, new products, lively columns and more. Subscribe now and get two software disks — **free** with your paid subscription!

WINDOWS SOURCES. GO WS
ONE-YEAR SUBSCRIPTION $14.97

GIFT BONUS

Get a head start on your garden with *Sprout!* from MacWarehouse.

Sprout! helps you plan your vegetable garden graphically. Comes with editable databases for seven growing regions and includes timing for planting and harvesting, normal yields, and spacing for seeds and plants. For the Macintosh.

MACWAREHOUSE. GO MW
***SPROUT!* SOFTWARE $45**

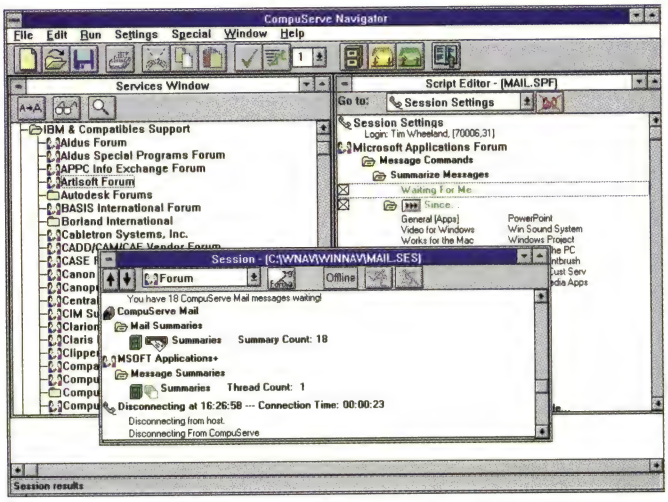
INTERNATIONAL DELIVERY AVAILABLE

Grow more beautiful flowers with help from *FLOWERscape.*

FLOWERscape is the ideal way to plan your flower garden on your PC. Select plants by color, size, scent, water and sun needs, climate, and more. Shows you how your garden grows during any month. Features beautiful plant pictures and easy menus. Requires *Windows 3.0*, 256 color monitor and 4MB RAM.

MICROWAREHOUSE. GO MCW
***FLOWERSCAPE* SOFTWARE $49.95**

INTERNATIONAL DELIVERY AVAILABLE



Save $29.95 on *CompuServe Navigator*™ *Windows* version!

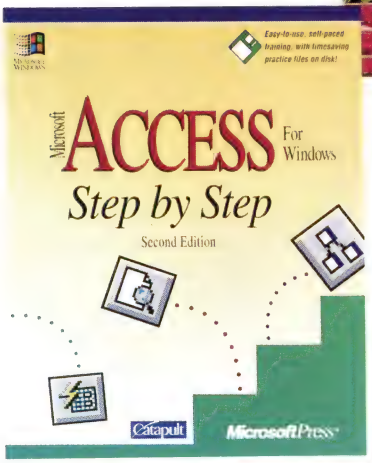
CompuServe Navigator gets you around CompuServe quickly — retrieving and sending messages, files and reports fast to save you connect-time. It also gives you automated access to many CompuServe forums, mail, weather and much more!

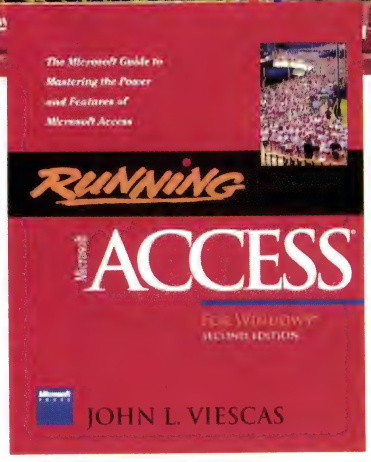
COMPUSERVE STORE. GO ORDER *COMPUSERVE NAVIGATOR, WINDOWS* VERSION
LIST PRICE $79.95
SALE PRICE $50
PLUS $25 CONNECT-TIME CREDIT!

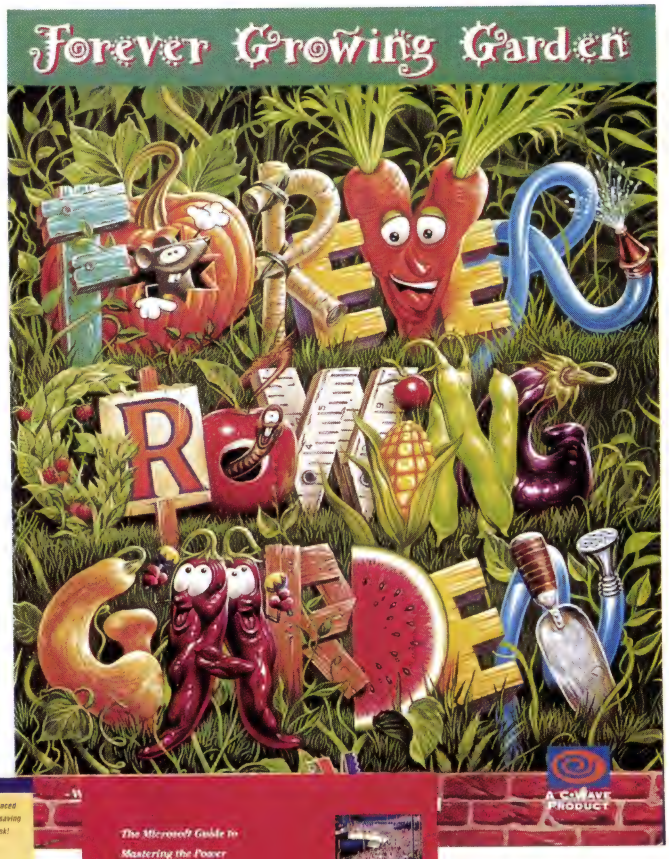
Learn Microsoft Access® and save 20%!

Speed your learning of *Microsoft Access* with the *Step by Step* book and disk training package. For an example-packed, comprehensive guide full of tips, strategies and the companion disk, get *Running Microsoft Access*. Order today and save 20%! Offer expires April 14.

MICROSOFT PRESS. GO MSP
***RUNNING MICROSOFT ACCESS FOR WINDOWS* $39.95**
***MICROSOFT ACCESS FOR WINDOWS STEP BY STEP* $29.95**







Save 20% on books to improve your PC communications.

Explore the latest developments and capabilities of the communications technology of AS/400 systems as well as IBM's NetView SNA network management program — in easy-to-understand language. Features software and hardware, LANs, open systems, connectivity and management techniques, and more.

MCGRAW-HILL ON-LINE BOOKSTORE. GO MH
AS/400 COMMUNICATIONS AND CONNECTIVITY HANDBOOK
LIST PRICE $49.50
SALE PRICE $39.60
NETVIEW: A PROFESSIONAL'S GUIDE TO SNA NETWORK MANAGEMENT
LIST PRICE $45
SALE PRICE $36

Save $23 and watch your garden come to life.

Create your own fantasy garden and have hours of fun without the work! Your garden grows even when your computer is turned off. Check the almanac for watering schedule, hints on what to plant and when to harvest. Even catch Gordon the Gopher before he gets all of your carrots. For IBM and Macintosh. International delivery.

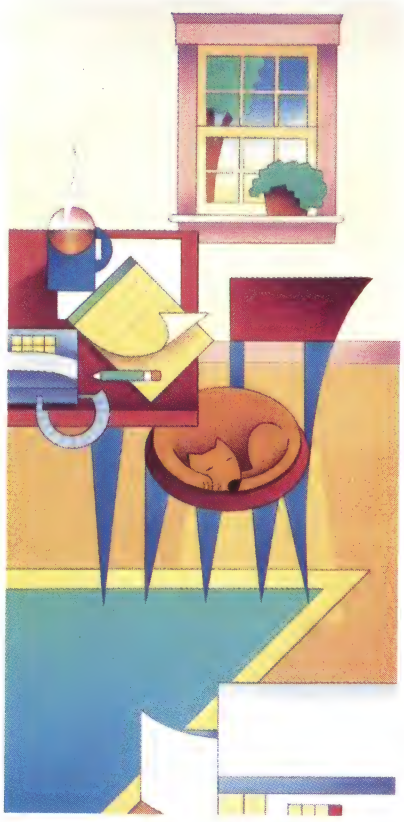
COMPUTER EXPRESS. GO EXPRESS
FOREVER GROWING GARDEN
LIST PRICE $59.95
SALE PRICE $37

INTERNATIONAL DELIVERY AVAILABLE

Now with CompuServe access, commuting to class has never been more convenient!

The University of Phoenix and CompuServe have teamed up to provide members like you with the most flexible way ever to earn your degree in business or management. From the comfort of your own home, office, or even while on the road, you can dial a local number and join the nearly 1,000 working professionals from around the country attending classes and learning from accomplished faculty seasoned by years of real-world business experience.

UNIVERSITY OF PHOENIX. GO UP



Safeguard your home base *and* your work base with HomeWork.

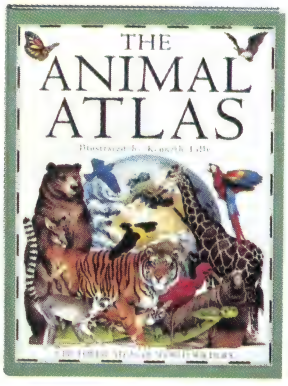
If your home base is also your work base, Continental's HomeWork product will cover your personal *and* business property and liability. Even if you work at home part-time, you can add HomeWork to a Link Plus home and auto package policy. Get details and a **free** quotation online.

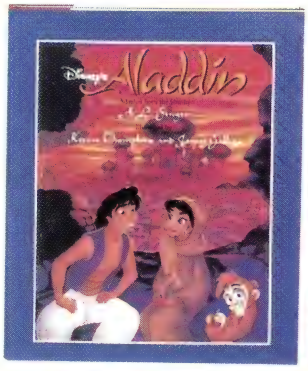
CONTINENTAL INSURANCENTER. GO CIC

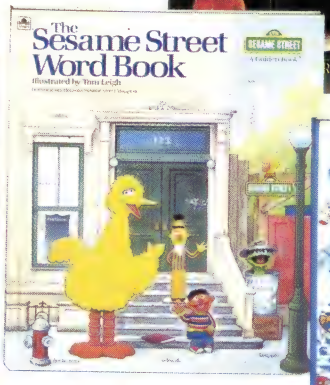
Get three great books for only $3 with Children's Book-Of-The-Month Club!

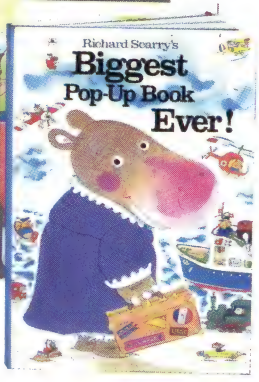
Here's a fantastic selection of titles your children will love always. Join now and get three books and a roomy tote bag for just $3, with an option to buy a fourth book for $3.99 with the purchase of two more books in the first year!

CHILDREN'S BOOK-OF-THE-MONTH CLUB. GO BOMC





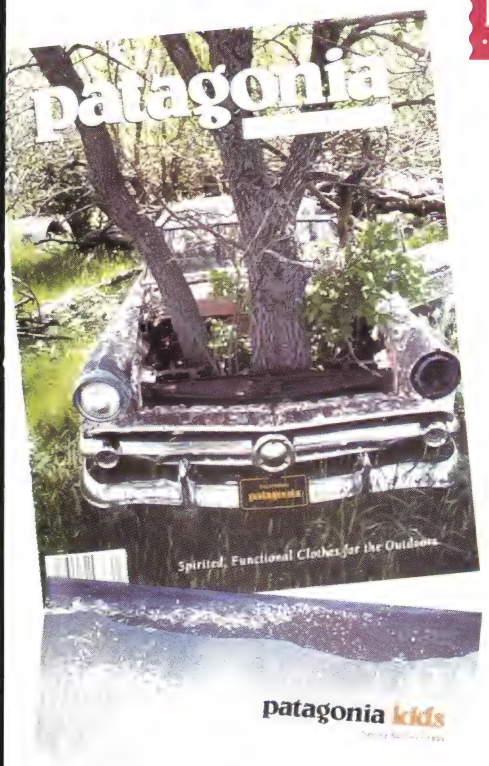




See the 1995 Ford Windstar — the future of mini-vans.

The all new front-wheel drive Ford Windstar sets a new standard by which all others will be judged. The styling is sleek, with a unique design and flow-through instrument panel. The true joy is the Windstar's ride — the smoothest in its class. Features include dual air bags, four-wheel ABS and much more. Go online for details and to download color graphics.

FORD ELECTRONIC SHOWROOM. GO FORD



Choose Patagonia® for innovative, functional clothes for the outdoors.

Patagonia is known for outdoor clothing built to the highest standards and for imaginative, informative catalogs. The current 120-page Spring Adult catalog includes the A/C™ line — shorts and shirts uniquely designed for hot weather and the PCR™ Synchilla® Sweater — a soft, warm fleece made from 80% post-consumer recycled polyester. Order a one-year Adult catalog subscription ($5) and receive **free** surface shipping (a $5.50 value) on your first Spring '94 catalog order. Kids' catalog available ($2).

PATAGONIA. GO PG

FREE DELIVERY

LIMITED TIME OFFER

Incorporate your business online — easily *and* inexpensively.

The Company Corporation can help you form your own corporation in minutes — for as little as $45 plus state filing fees! No hassles, no legal fees. Protect your personal assets and get valuable tax breaks. Get a **free** brochure and more details online. Receive a $10 usage credit if you incorporate by April 15.

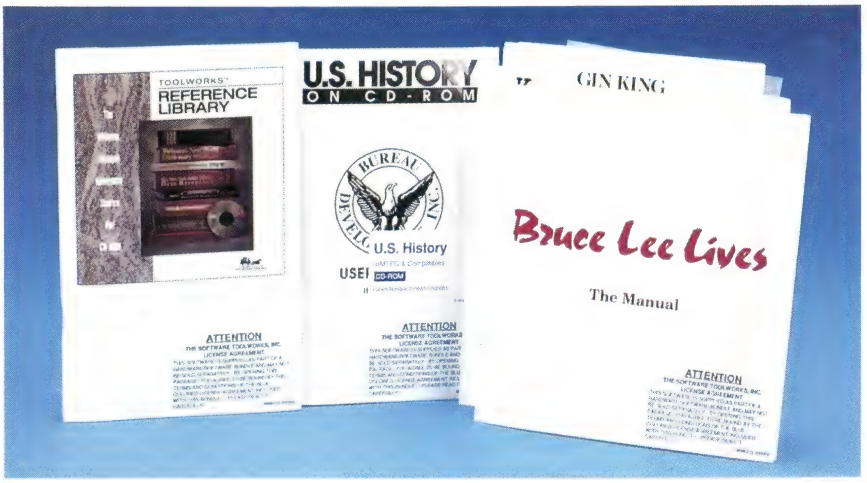
THE COMPANY CORPORATION. GO CORP

NEW MERCHANT

Optimum nutrition for your dog or cat — from Iams!

Dogs and cats love the real-meat taste of Iams premium-quality dry and canned foods — and you'll love the results you'll see in your pets when you feed them Iams! All Iams dog and cat foods are 100% complete and balanced, 100% satisfaction guaranteed. Request **free** samples online!

THE IAMS COMPANY. GO IAMS



Get a whole reference library with the *Toolworks* CD-ROM set.

Now you can have a whole reference library of your own available anytime with the *ToolWorks* CD-ROM bundle. And because life isn't *all* work, there are ten great games included with this value pack. Includes U.S. history, *Dictionary of Quotable Definitions*, *Webster's New World Dictionary*, The National Directory and much more. International delivery available.

DALCO COMPUTER STORE. GO DA
***TOOLWORKS* CD-ROM LIBRARY AND GAME PAK $98.30**

INTERNATIONAL DELIVERY AVAILABLE

Explore the finest in comunications products at The Escort Store.

In 1978, Cincinnati Microwave began its tradition for high-performance, superherterodyne radar detectors with the original Escort, followed by Passport. Now, Escort expands its state-of-the-art technology with the Digital Spread Spectrum Cordless Telephone, offering high-quality voice transmission, signal security for privacy and a range up to five times greater than other cordless phones. Request a **free** catalog online.

THE ESCORT STORE. GO CMW

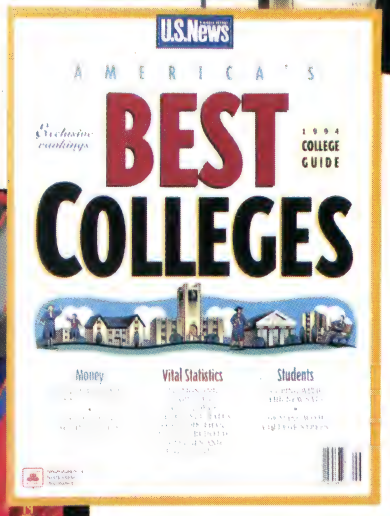
NEW MERCHANT

Shop for the latest and best in PC equipment at Exec/Direct.

Exec/Direct has taken the hassle out of computer shopping. They've gathered together the finest hardware, software, communications, multimedia and CD-ROM vendors — all the leading brands — in one convenient place. And everything is at highly competitive prices! Browse their store to find the equipment you need, get instant reviews and product comparisons, then order on the spot. Exec/Direct is the intelligent PC shopper's resource. Stop in and explore online.

EXEC/DIRECT. GO PWM

NEW MERCHANT



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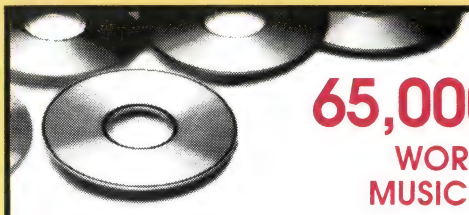

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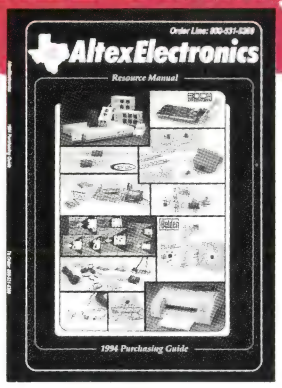

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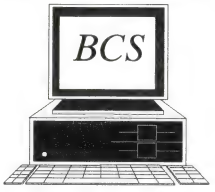

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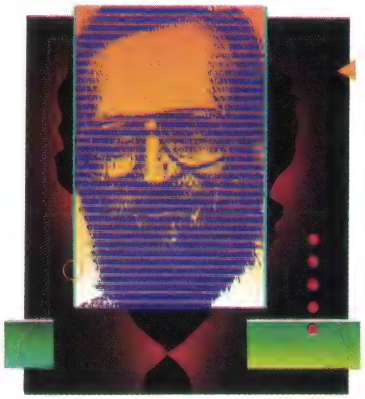

How can I search GIF graphics files to find ones of interest? Also, can I view graphics before downloading them?

James A. Forster
Barrington, Rhode Island

A fast way to locate GIFs is to use the Graphics File Finder database (GO GRAPHFF), which contains data on more than 16,000 images in the various graphics forums' libraries. You can enter up to three keywords to do a quick cross-forum search. The report tells you the names and descriptions of files meeting your specifications and the names of the forums in which they can be found.

It is possible to view graphics before downloading if your communications program supports GIF display. If you are using one of the CompuServe Information Manager platforms, GIF display is supported, and you can simply select the View option while browsing library files. The system displays the graphic (the speed of the display depends on your modem speed, of course) and at the end gives you an option to save the file to disk. If you are using a program other than CIM, check your user manual. Some of the newer terminal programs are incorporating GIF functions.

Is there a way to get a listing of what is contained in each of the GIF files in any of the graphics forums' libraries? There are some terrific pictures out there, but what kind of information does a file name like RTQ345.GIF tell you about the file's contents? Is there an overall index with one-line descriptions of the files' contents?

Daniel J. Topp
Schnecksville, Pennsylvania

As in many forums, the graphics forums' libraries each contain regularly updated catalog files that offer short descriptions of each file in that specific library. To find catalog files, access a library and use the Browse option and specify *.CAT (all of the catalog files in the graphics forums have the extension CAT). Also, there are ZIPped (archived) versions of the catalog files in the individual libraries.

I would like to order CIM for a friend. Can I order it and have it shipped there? Will I get a bonus by ordering CIM for a friend?

Eli Tomer
El Cerrito, California

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Charles Bowen is a contributing editor of CompuServe Magazine *and co-author of the* How to Get the Most Out of CompuServe *book series and author of* CompuServe from A to Z *from Random House.*

Send questions to CompuServe User ID number 70007,411. If your question is answered in this column, we'll apply a $25 connect credit to your CompuServe account.

Mensa® Puzzler

This month's puzzle was submitted by CompuServe member Gene Sprung. You'll find the answer in the Mensa Forum's News Flash (GO MENSA).

An employer, unable to decide among three highly qualified applicants for a position that demands excellent reasoning power, devises the following test:

He seats the applicants at a round table so that they are in clear view of one another. He turns off the light and tells them that he will touch the forehead of each applicant and, in doing so, will either put a black spot there or he will not. He explains that when he turns the light on, anyone seeing a black spot on at least one other person's forehead must start tapping the table, and must stop tapping only if and when he is certain whether or not he has a spot on his own forehead. The job will go to the first one who stops tapping and, after giving the right answer, can explain how he reached his conclusion.

In the pitch darkness, the employer leaves a black spot on everyone's forehead.

AMANDA HALEY

When he turns the light on, all of the applicants (seeing a spot, not only on one, but on both of the other foreheads) begin tapping the table. In a few moments, one of them stops tapping and says he knows there is a spot on his forehead.

How could he be so sure?

Do you have a Puzzler that you'd like to share with *CM* readers? Send your entry of no more than five brief puzzles (with answers) to: Puzzlers, *CompuServe Magazine*, P.O. Box 20212, Columbus, OH 43220. Include your full name, address, daytime telephone number and CompuServe User ID number. Puzzles that are not sensitive to character positioning may be sent by CompuServe Mail to User ID number 76004,3302. If your puzzle is used here, we'll credit $35 to your CompuServe account.

Graphic of the Month

CM's Graphic of the Month is a GIF image of a copperband butterflyfish in an underwater reef scene by Robert A. Mickelsen. Mickelsen ray-traced the image with the program POV-Ray on his '486 66 DX/2 IBM PC-compatible computer, which has 8MB of RAM. He used the modeler MORAY to create the fish and place all scene elements. The file, COPPER.GIF (218,193 bytes), can be found in the Graphics Developers Forum (GO GRAPHDEV), Library 9, "POV Images." A professional glassblower who enjoys surfing, fishing and computer graphics, Mickelsen has been working with computers and POV for about two years.

This month's runners-up are "Staff in 19th Century Costume" by John Luxton, found in the Living History Forum (GO LIVING), Library 14, "Business/Industry," MORW01.GIF (84,274 bytes); and "Workspace Rendering" by Dana K. Pellerin, found in the Graphics Developers Forum (GO GRAPHDEV), Library 7, "Raytrace Images," WRKSPA.GIF (53,772 bytes).

If you have a favorite image on CompuServe, consider nominating it as a Graphic of the Month. Provide the file name and identify the forum and library where the image is stored (do not send the files themselves) and send the information by CompuServe Mail to User ID number 76004,716. If the image you nominate is published in this column, you and the image uploader/creator will receive a $25 CompuServe account credit. Image uploaders/creators are permitted to nominate themselves, but only one $25 credit is applied to each member.

MEMBER ESSAY

On a Wild (Haired) Pooch Chase

CompuServe helped us find a sheepdog puppy for our old dog, Sally, who was grief-stricken and pining over the recent loss of her son.

I didn't think I'd have to turn the world upside down to find one, but after calling breeders all over the United States, the U.S. Kennel Club and a breeder in England, I was about to give up.

I sought help in the U.K. and Pets forums. In the Pets Forum, member Cheryl Gorsky posted an ad she saw in *The Washington Post*. After five days of frantic telephone negotiations, I finally met "Edward" at Houston's Intercontinental Airport. He is a delightful, shaggy mess of a puppy, whom I would still be looking for if it weren't for the help I received online. Sally is now happily growling away at the new lad.

Now, I have to buy a scanner because so many people are demanding GIFs of both the old girl and the new boy. That's a dandy excuse, isn't it?

Ann Freelander
Houston, Texas

Compete for $50 worth of connect-time credits in *CompuServe Magazine*'s monthly Member Essay contest. Write a 200-word essay describing an original way you've used the Information Service and send it to CompuServe User ID number 76004,3302. Include your full name and address.

I frequently use CompuServe to download a single file at a time. I use the "Mark" option in WinCIM to flag the single file for download. I then select "Retrieve Marked" from the Mail menu, which pops up the "Retrieve Marked" dialog box.

By selecting the "Disconnect When Done" checkbox in this dialog, I don't have to sit and watch my computer during the download. I simply initiate the download and walk away, knowing that I will be disconnected when my download is finished. This also works when downloading multiple files that are marked for retrieval.

Pat Hughes
Edmonton, Alberta,
Canada

If you use certain services more than others, you can create a custom, personalized menu every time you log on. To do this, GO TERMINAL. Choose Option 2, "Change Permanent Settings," followed by Option 2, "Log-on/Service Options," and then Option 3, "Establish Personal Menu." Instructions follow from that point. GO MENU and your custom menu will pop up again.

Abe Liebsch
S. Milwaukee,
Wisconsin

When you type your password in WinCIM, all that shows on the screen is a series of asterisks. I type the password in Notepad first (any Windows word processor will do), then cut and paste it into WinCIM. That way, I don't have to worry about typing mistakes. If you are concerned about security, immediately copy something else into the Windows clipboard, which will erase your password.

Mark Schenk
Rome, Italy

Have a good tip about using the Information Service that you'd like to share with other CompuServe members? Send it to CompuServe User ID number 76004,3302 and type "Tip of the Month Contest" on the subject line. If your tip is published in this column, we'll apply a $25 connect-time credit to your CompuServe account.

UPDATE

COURTESY: THE UTAH SHAKESPEAREAN FESTIVAL

Forum Returns to Yonder Days

If you've got a passion for the past, stop by the Living History Forum where members who re-enact historical events and time periods discuss their avocation. The forum covers non-European history, medieval times and the Renaissance, civil wars, revolutions, arms and armour, costuming, groups such as the Society for Creative Anachronism and more. Also, download GIFs of living history events, such as the Utah Shakespearean Festival (above). GO LIVING

Comics Take on a Graphic Appeal

Comic relief takes on a different form with graphic novels in the Comics Forum. Famed comic book artist Ernie Colon created one specifically for forum members titled, "NECRO: A Tale of Horror in Manhattan, Circa 1931." The cover (above) and first 13 pages are available in Library 14, "Comic Art GIF Files." Also, view exclusive preview art from top comic book companies Marvel Comics and Malibu Comics, which have their own libraries in the forum. GO COMICS

View images from a world-leading source of historical engravings, drawings and photographs in Archive Photos Forum. Archive Photos' images range in subject matter from the beginning of civilization to U.S. and world history to sports and the arts. GO ARCHIVES

Visit the Microsoft France Forum, Microsoft's first French-language service on CompuServe, to ask questions of Microsoft France representatives and download help files, product data sheets, technical notes and news from the French subsidiary. GO MSFRANCE

Tour the Absolut Museum in The Electronic Mall. The store offers GIF images from Absolut's award-winning advertising campaign. Also, sample or buy the complete museum, a 3-D program containing more than 200 paintings, photographs and fashion designs which made Absolut Vodka a top seller. GO ABSOLUT

TTN-Net has reduced its rates for accessing CompuServe from Taiwan. The communications surcharge is $23 per hour, with access available from seven locations. For telephone numbers and log-on instructions, GO LOGON.

Interact with SYBEX authors and readers in the SYBEX Publishing Forum. SYBEX books teach novice to expert computer users how to get the most from their hardware and software. GO SYBEX

Explore ZiffNet and ZiffNet/Mac from April 8 to 18 without paying the $2.95 monthly membership fee. You'll find a wealth of free computing news, downloads (including a free set of screensavers) and a ZiffNet members-only special offer. GO FREEPEEK

In April, first-time users of Business Database Plus receive up to a $5 rebate on surcharges incurred during their first session. Retrieve full-text articles from more than 500 business and trade publications and more than 550 industry newsletters. GO BUSDB

In April, first-time users of Computer Database Plus receive up to a $5 rebate on surcharges incurred during their first session. Retrieve full-text articles and abstracts from more than 200 computer publications. GO COMPDB

NEXT MONTH • What's Upkeep: Do-It-Yourself PC Repair and Maintenance • Chips Off the New Block: Should You Buy Pentium, PowerPC or '486? • So Inc-lined: The Pros and Cons of Incorporating • Shedding Light on Language: How to Help Translators Help You Send the Message • Self-Publishing: Going It Alone in the Book Business

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Thom Hartmann,
Sysop, Desktop Publishing Forum

"In May of this year we incorporated with you and are extremely happy with the services you provided. With your services, you took the mystery out of incorporating and made Delaware law work for us. It's also nice to know that whenever we have a question, we can just dial you up (as we did quite a few times when we were filling out those S status filing and EIN application forms!). Thanks again for all your help!"

Janice and Robert Pfister
J&R Marketing Incorporated

"I've now set-up four corporations online with The Company Corporation. Each time it was a pleasure to deal with them—the process was just as fast and easy as promised! Everyone I communicated with was very friendly and knowledgable. I recommend The Company Corporation to everyone who needs to form a corporation."

Julian Sorel
Sorel Data Services

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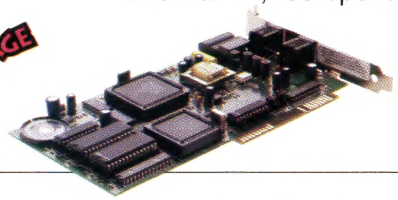

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